



SUSTAINING
ECOSYSTEMS
THROUGH
RESPONSIBLE
BUSINESS PRACTICES



WWF-MONDI WETLANDS PROGRAMME

Celebrating 25 *years*

A quarter century of





wetland conservation

What's in a name?

Over the course of its 25-year journey, the now WWF-Mondi Wetlands Programme has changed its name three times.

1991–2000: Rennies Wetland Project

The programme was named after the Rennies Group – the primary funder at the start – and was managed and implemented by Ezemvelo KZN Wildlife (then the Natal Parks Board) from 1991 to 1995, with WESSA taking over in 1996.

2001–2012: Mondi Wetlands Programme

The programme's name changed in 2001 when Mondi became the primary funder. WESSA was still the lead management agency, with strategic support from WWF-SA in guiding the programme and expanding its global reach.



2013–present: WWF-Mondi Wetlands Programme

In late 2013, the management and implementation of the programme was transferred from WESSA to WWF-SA. It formed an integral part of the new global partnership between WWF and Mondi and was formally renamed the WWF-Mondi Wetlands Programme.

WWF and Mondi acknowledge and thank all the previous funders and conservation management agencies for their roles and contributions in initiating, shaping and growing the success of the programme.

In this publication, the programme is referred to by its current name, i.e. the WWF-Mondi Wetlands Programme (WWF-MWP).



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Message from Morné du Plessis

CEO: WWF-SA

The 25 years of the WWF-Mondi Wetlands Programme (WWF-MWP) provide an important story of foresight, determination, inspiration and the power of strategic and meaningful partnerships.

The WWF-Mondi journey is a story about people and the incredible impact we can make when we come together, in all our diversity, and put our ideas, resources and energy to good use.

WWF South Africa's mission is to champion the Earth's capacity to provide a source of inspiration, sustainable food, water and clean energy for all, and the WWF-MWP has admirably supported us to work towards this mission. The programme has achieved this by catalysing and inspiring a wetland community of practice to improve the wise use of wetlands and manage our most valuable and limited natural resource – water. It has worked closely with the agriculture and forestry sectors to strengthen food and fibre security through improving the sustainability of their agro-forestry practices.

The WWF-MWP has excelled in developing a deep understanding of the socio-ecological issues that are critical to wetlands and freshwater stewardship, and of the technical skills needed to wisely manage wetlands. **I have always been impressed by the passion and positive outlook of the staff working with the programme and how they have adapted to the changing times during the programme's history, despite many challenges along the way.**

Over the years, as the wetland community has grown, the WWF-MWP has worked with partners in government and the broader conservation NGO sector to develop a large cohort of young "wetlanders" that is more representative of the racial and gender balance of the country.

I also admire the solid and long-term relationships that were developed with individual corporate

companies and key partners in industry. To date two primary corporate funders – Rennie's and Mondi – have supported the programme over its 25-year history. This is a significant achievement, and one that reflects the high regard these funders have for the WWF-MWP, its financial prudence and its innovative approach to catalysing wetland conservation outside protected areas. I also want to acknowledge and thank WESSA for its role in guiding and diligently managing the activities of the WWF-MWP for 17 of its 25-year existence.

WWF-SA's 15-year-old (and counting) partnership with Mondi continues to go from strength to strength. Over the years, we have certainly seen the value that Mondi brings to the partnership through strategic leadership, consistent funding and adopting a hands-on approach. It is through this successful partnership in South Africa (as well as in Europe and Russia) and the mutual trust and respect built over this time that we were able to launch a new and ambitious global partnership in 2014, which aims to promote environmental stewardship in Mondi's own operations and in the wider packaging and paper sector.

The WWF-MWP has been truly reflective of the values that WWF stands for: being knowledgeable, optimistic, determined, engaging, accountable and inclusive. We are immensely proud to have a programme like the WWF-MWP that has stood the test of time over the past quarter of a century.

A handwritten signature in black ink, reading "Morné du Plessis".

Morné Du Plessis



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Message from Ron Traill

CEO: Mondi South Africa

The WWF-MWP embodies the qualities that make a partnership successful. It is about people believing in the value of the work being done – backed up by insightful leadership, enduring relationships, strong technical input and consistent corporate funding to develop and maintain a core team of experts.

Over the past 25 years, much has changed, but the commitment to promoting and enabling the wise stewardship of wetlands has been constant.

Mondi owns and leases about 250 000 hectares of land in South Africa, covering 20 000 hectares of wetlands. We maintain 100% Forest Stewardship Council® certification of our forests – including the identification and protection of high conservation value areas. In addition to certification and sustainable procurement practices, we focus on the proactive and responsible stewardship of forests and freshwater ecosystems, and the maintenance of biodiversity and important habitats. For us, responsible forest management means increasing long-term productivity on commercial areas, maintaining functioning ecosystems and conserving high conservation values in the landscape – particularly wetlands in water-scarce South Africa.

My first field trip to see the work being done by the WWF-MWP was in 2008, not long after I took over as the CEO of Mondi South Africa. **The far-reaching environmental and social impact of the programme immediately captured my attention. It has changed the way government agencies, communities, industry and NGOs work together – elevating the profile of wetland conservation across industries such as forestry, sugar and dairy farming. It was clear that the success of the programme is intrinsically linked to the compelling enthusiasm of the core team, and their ability to connect conservation imperatives with business priorities and community needs.**

The work we have done together has enabled Mondi to make significant progress in our

approach to protecting wetlands. However, it has also brought other benefits, including decreasing Mondi's water footprint through wetland delineation with buffer zones; improving the resilience of these key freshwater ecosystems to cope with climate change; helping us to better understand and manage the risks associated with water; improving relationships with local communities and the conservation community; and developing the skills and expertise of our people.

The WWF-MWP is an excellent example of how partnering proactively over the long term has enabled Mondi to be part of the solution. It exemplifies our commitment to growing responsibly. We are very proud of the contribution we have made to the protection of South Africa's wetlands and the development of wetland conservation practices.

The importance of partnerships is a constant feature in the compelling story of the WWF-MWP. I would like to pay tribute to Rennies who saw the potential of this programme at the outset, to WESSA for the central role they played, to all the other sponsors who have contributed over the past 25 years, and to WWF-SA for their collaborative approach and ongoing support. Sincere thanks go to the WWF-MWP team and everyone who has joined forces with them to champion wetland conservation.

Ron Traill



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Message from Valli Moosa

Chairman of the WWF-SA board

The visionary leadership role the WWF-MWP has played in strengthening the protection and sound management of South Africa's wetlands cannot be overstated.

Since its formation in 1991, the programme has – through long-term and meaningful partnerships with the science community, government, other NGOs and the forestry and agriculture sectors – worked to create positive and constructive spaces that have given rise to some of the most innovative, inclusive and impactful wetlands and freshwater management initiatives in the country outside of protected areas.

I wish to congratulate WWF-SA, Mondi, WESSA and all the previous partners and supporters who have worked together tirelessly over the last 25 years to preserve the integrity of

South Africa's wetlands. You have done – and are doing – invaluable work to ensure the health of our natural systems for the benefit of current and future generations.

Valli

Valli Moosa

Chairman of the WWF-SA board, former Minister of Environmental Affairs (1999–2004) and former President of the IUCN (2004–2008)



Acronyms and abbreviations

AWARD	Association for Water and Rural Development	SANParks	South African National Parks
AWS	Alliance for Water Stewardship	SASA	South African Sugar Association
CBO	Community-based organisation	SASRI	South African Sugarcane Research Institute
DEA	Department of Environmental Affairs	SAWAG	South African Wetland Action Group
EPWP	Expanded Public Works Programme	SETA	Sector Education and Training Authority
FSA	Forestry South Africa	SUSFARMS®	Sustainable Sugarcane Farm Management System®
FSC®	Forest Stewardship Council®	WATER	Wetland Alliance for Training Education and Research
HCV	High conservation value	WESSA	Wildlife and Environment Society of South Africa
KZN	KwaZulu-Natal	WfW	Working for Water
NGO	Non-government organisation	WOW	Windows on our World: Wetlands
NGP	New Generation Plantations platform	WRC	Water Research Commission
NPB	Natal Parks Board	WWF	World Wide Fund for Nature
ORI	Oceanographic Research Institute	WWF-MWP	WWF-Mondi Wetlands Programme
RWP	Rennies Wetland Project	WWF-SA	WWF South Africa
SAB	South African Breweries (now SABMiller)		
SANBI	South African National Biodiversity Institute		

“I am convinced that Mondi’s responsible approach plays a major role in our success. Effective partnerships are a central component, helping to share sustainable practices across our industry, and beyond. The WWF-MWP is a wonderful example of how innovative approaches, collaboration and transparency can help people to find common ground and make significant progress.”

– Fred Phaswana, Joint Chairman: Mondi Group
(and former Vice-chairman of the WWF-SA board)

A quarter century of wetland conservation at a glance

1991

- Rennies Wetland Project launched in KwaZulu-Natal
- Project conceptualised by WWF-SA and WESSA and managed by Natal Parks Board

PEOPLE:



Manager –
John Whyte of the
Natal Parks Board

FUNDERS:

Rennies, Mazda Wildlife Fund
and SAB

1996

- Project goes national and is implemented by WESSA

PEOPLE:



New manager –
David Lindley of
WESSA

FUNDERS:

Rennies, Mazda Wildlife Fund
and SAB

- Start of wetland health surveys, which build capacity and initiate the wetland community of practice
- Programme starts working with forestry sector and government on delineation
- First wetland rehabilitation projects begin with landowners and government, including Working for Water
- Work with the Ramsar Convention on Wetlands is initiated

1997–99

PEOPLE:



3 full-time staff and 4 interns
placed in provincial agencies
(KZN, Free State and
Mpumalanga)

FUNDERS:

Rennies, Mazda Wildlife Fund
and SAB

2014–16

PEOPLE:



6 full-time staff

FUNDER:

Mondi

- Start of the WWF-Mondi global partnership
- WWF-MWP expands beyond wetlands and tackles water stewardship in priority KwaZulu-Natal catchments
- The landscape approach is piloted as a concept to strengthen water stewardship in key KZN catchments
- Work with dairy sector commences
- Local authority capacity building for water stewardship starts
- WWF-MWP expands its global reach by sharing its lessons and experiences through the WWF New Generations Plantation platform

PEOPLE:



6 full-time staff and 4 interns

FUNDER:

Mondi

2001

- Mondi comes on board as primary funder
- Programme name changed to the Mondi Wetlands Programme (MWP)
- MWP starts to work closely with WWF International and network offices, sharing lessons

2000

- Working for Wetlands launched
- Rennies Wetland Project plays a key role in catalysing Working for Wetlands

2002–05

PEOPLE:



5 full-time staff

FUNDERS:

Mondi and Mazda Wildlife Fund

- Work started with the sugar industry to strengthen the socio-economic and environmental practices of farmers
- Eight-year project working with communal wetland users launched
- Development of tools to support wetland learning and practice
- First independent and external evaluation of programme conducted
- Government adopts delineation procedure as “A practical field procedure for delineation of wetland and riparian areas”
- Forestry South Africa (including main companies Mondi, Sappi and Safcol) adopts a voluntary approach to use the delineation procedure to remove commercial trees from wetlands and riparian areas (an estimated 5-6% of commercially planted areas to date)

2006–09

PEOPLE:



8 full-time staff

FUNDERS:

Mondi and Mazda Wildlife Fund

- MWP champions social learning as a tool to support collaborative action and social change
- Wetland Alliance for Training, Education and Research (WATER) launched to formalise and strengthen wetland training
- Start of internship programme growing young wetland professionals

2010–12

PEOPLE:



6 full-time staff and 3 interns

FUNDERS:

Mondi and Mazda Wildlife Fund

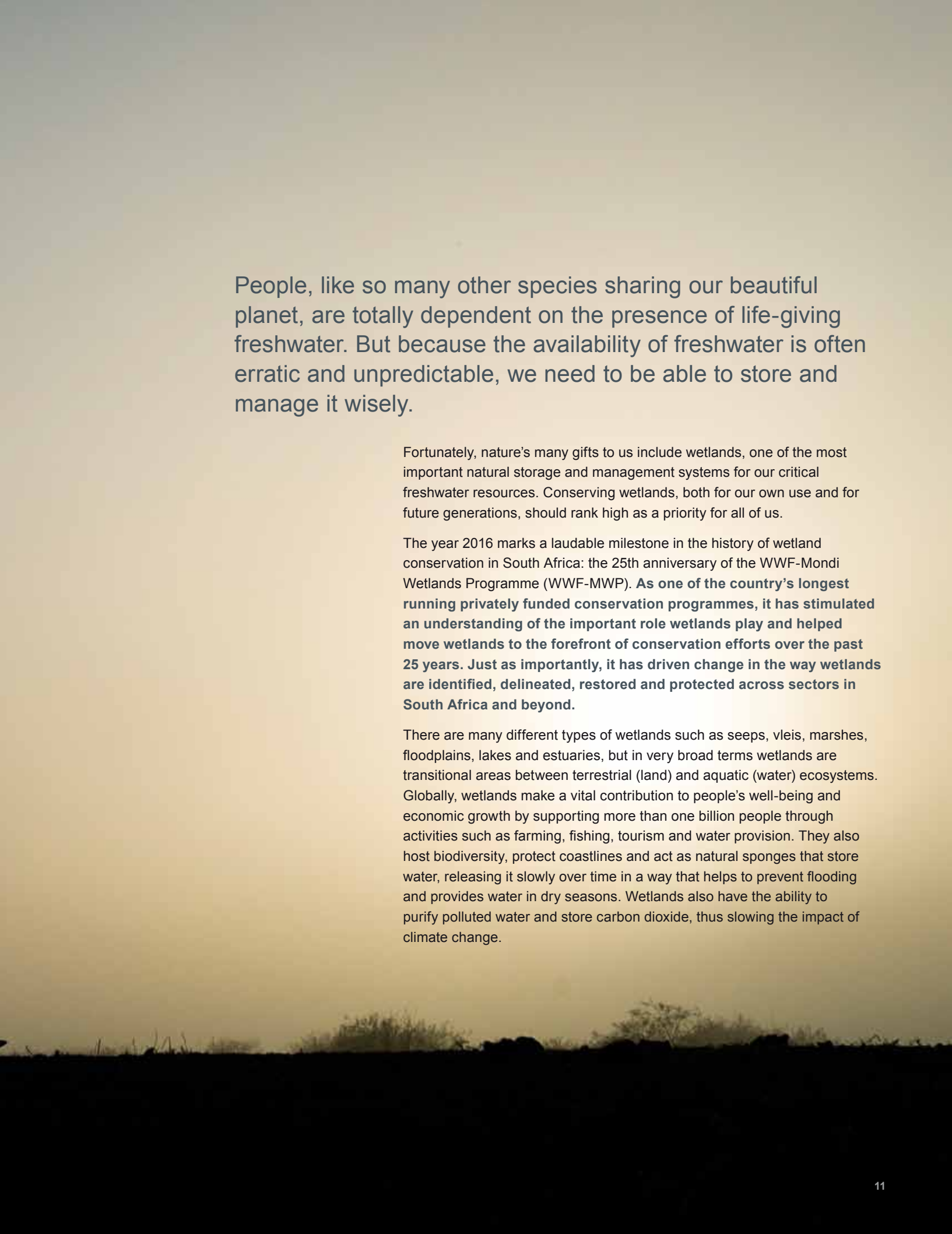
- MWP and Mondi complete first ever State of the Wetlands report by a large landowner
- MWP works with Mondi to support organisational learning and development for improved wetland and environmental management

2013

- MWP transfers from WESSA to WWF
- Programme name formally changed to WWF-Mondi Wetlands Programme (WWF-MWP)



Introduction



People, like so many other species sharing our beautiful planet, are totally dependent on the presence of life-giving freshwater. But because the availability of freshwater is often erratic and unpredictable, we need to be able to store and manage it wisely.

Fortunately, nature's many gifts to us include wetlands, one of the most important natural storage and management systems for our critical freshwater resources. Conserving wetlands, both for our own use and for future generations, should rank high as a priority for all of us.

The year 2016 marks a laudable milestone in the history of wetland conservation in South Africa: the 25th anniversary of the WWF-Mondi Wetlands Programme (WWF-MWP). **As one of the country's longest running privately funded conservation programmes, it has stimulated an understanding of the important role wetlands play and helped move wetlands to the forefront of conservation efforts over the past 25 years. Just as importantly, it has driven change in the way wetlands are identified, delineated, restored and protected across sectors in South Africa and beyond.**

There are many different types of wetlands such as seeps, vleis, marshes, floodplains, lakes and estuaries, but in very broad terms wetlands are transitional areas between terrestrial (land) and aquatic (water) ecosystems. Globally, wetlands make a vital contribution to people's well-being and economic growth by supporting more than one billion people through activities such as farming, fishing, tourism and water provision. They also host biodiversity, protect coastlines and act as natural sponges that store water, releasing it slowly over time in a way that helps to prevent flooding and provides water in dry seasons. Wetlands also have the ability to purify polluted water and store carbon dioxide, thus slowing the impact of climate change.



Above: Wetlands can reduce the severity of droughts and floods by regulating streamflow. They also purify water and provide habitat for many different plants and animals.

But despite providing these many vital ecological goods and services to society at no cost, wetlands are still all-too-often incorrectly viewed as insect-ridden swamplands best drained and developed. Since the turn of the 20th century, about half of the planet's wetlands have been destroyed. In the case of South Africa, the 2011 National Biodiversity Assessment estimates that the country has lost a similar percentage in line with this global trend.

Meanwhile, water stress in the country is fast reaching a critical point. In its second National Water Resource Water Strategy (2013), the then Department of Water Affairs estimated that the rising demand for water in South Africa will exceed supply by 2025 – less than a decade away – if current water use and freshwater ecosystem degradation trends continue.

It is obvious that the wise stewardship of wetlands and freshwater ecosystems is of paramount importance to secure the limited

water resources we have, and to maximise the many significant social and economic advantages that wetland conservation offers, such as employment and social development opportunities.

For example, it is not a coincidence that to date the South African government has committed over R1 billion to the Working for Wetlands programme – the WWF-MWP played a catalytic role in initiating this programme in 2000. As one of a suite of state-run environmental programmes, Working for Wetlands alleviates poverty by using previously unemployed people to rehabilitate degraded wetlands, thereby securing water and maintaining biological diversity while contributing to socio-economic development goals.

It may sound like a cliché, but effective wetland conservation as advocated and practised by the WWF-MWP is a true “win-win” situation – and the need for such action has never been as pertinent as now.

How the WWF-Mondi Partnership in South Africa began

Nearly 20 years ago, an unlikely group of stakeholders gathered in Johannesburg for a meeting that would bolster South Africa's wetland conservation efforts and result in a global partnership between WWF and Mondi.

Back in 1997 it was far harder for an environmentalist like WWF-Mondi Wetlands Programme (WWF-MWP) manager Dr David Lindley to walk into a room full of forestry owners and convince them of the value of wetlands, and the need to take better care of these areas.

"I simply said that plantations are destroying wetlands and riparian areas, and part of the reason is that people don't appreciate their natural boundaries," says Lindley.

He asked if it made more sense for conservationists and plantation owners to keep defending their positions in the media or rather work together to find a solution.

Lindley and his team, through the generous sponsorship of RENNIES (a large South African corporate group), had begun to define wetland boundaries using mainly vegetation and soil indicators. They then asked the plantation forestry industry to refine and help develop an effective approach for identifying and protecting wetlands to address the country's water challenges more proactively.

Peter Gardiner, Mondi's group natural resources manager, recognised the practical connection between wetlands and the hydromorphic soils identified in the detailed soil survey recently carried out by Mondi and others in the industry. **Mondi was the first commercial forestry company to commit to the wetland conservation journey and encouraged others in the forestry sector to do the same. From here the forestry industry and conservation agencies started working together.**

The collaboration was primarily led by a small technical team co-chaired by Mondi and the WWF-MWP, comprising respected soil, hydrology

and ecology specialists. It took about five years to come up with a practical delineation method sanctioned by Forestry South Africa (FSA) on behalf of the industry and agreed to by all participants. This was then presented to the government to sanction as the delineation method to be used by government departments and land-use sectors in South Africa.

The agreed methodology included an appropriate buffer zone between the edge of the wetland and where plantation trees could be planted. Gardiner says, "Agreeing on appropriate buffer zones around delineated wetlands proved particularly difficult, partly because increasing any buffer by even a small amount quickly adds up to a substantial area and hence a significant loss of plantation forestry income."

Mondi led the way and collectively the forestry industry has already withdrawn commercial trees from an estimated 5–6% of planted areas. In doing so, the industry gained the respect of the environmental community. Practical delineation helped to facilitate certification to the Forest Stewardship Council® (FSC®) standard, and at the time provided more access to international markets.

The approach worked because it was co-created by the forestry industry, environmentalists and the government. The long development process allowed the different parties to build a relationship of trust and mutual respect, which were vital precursors to the strong collaboration.

Mondi became the first large landowner to work on rehabilitating degraded wetlands. This example played an important role in helping the WWF-MWP to catalyse Working for Wetlands, a government-led wetland rehabilitation programme.

The journey with WESSA

When friendships intersect with professional expertise and passion, great partnerships and winning conservation programmes can be forged. That was the case when WWF-SA and WESSA teamed up to establish the Rennies Wetland Project, which in turn evolved into the WWF-Mondi Wetlands Programme.

In April 1991, researcher and ecologist Dr George Begg had just completed a wetland survey documenting massive damage to these key ecosystems in KwaZulu-Natal (KZN). Keith Cooper, then WESSA's conservation director, approached WWF-SA's chief executive at the time, Dr Allan Heydorn, to see whether they could jointly support Jon Wyatt, an enthusiastic young Natal Parks Board official with a strong interest in wetland conservation.

"Alan and I had worked together at the Oceanographic Research Institute. We were good friends," Cooper explains, "so I asked Alan whether WWF-SA would raise funds, and he put it to his board."

The WWF-SA board duly approved a five-year initiative and Rennies agreed to become the primary funder, with South African Breweries (now SABMiller) and the Mazda Wildlife Fund also involved as secondary funders. Wyatt became the first full-time wetland conservationist working outside protected areas, with the Natal Parks Board as the implementing organisation. A steering committee made up of representatives from WESSA, WWF-SA, the Mazda Wildlife Fund and Rennies was formed to guide the project.

After the initial success of Phase 1 in KZN, the project was expanded into a national programme for another

WESSA's role in the formative years of the programme was invaluable to the success of the WWF-MUP.



five years. Dr David Lindley, then WESSA's regional conservationist, was appointed programme manager.

As a national organisation, WESSA became the programme implementer, although it was still guided by the steering committee. **It was a collaborative approach, with WWF-SA securing funding and managing the corporate relationship, and WESSA employing and managing staff to do all the operational work.** In October 2013, the management and implementation of the WWF-MWP was moved from WESSA to WWF-SA, with staff being transferred across.

Malcolm Powell, WESSA's chief executive for 16 years and chairman of the WWF-MWP

steering committee, explained that, like most organisations, WESSA had developed its own strategic plans at an early stage, with water conservation at the top of its priority list. "So our partnership with the Rennies Wetland Project and then the WWF-MWP fitted very neatly into what we saw as a critical focus for our organisation, and also for the country," he says.

WESSA's role in the formative years of the programme – including the implementation of the programme, operational management, staff development, environmental education and chairing the steering committee – was invaluable to the success of the WWF-MWP.

25 wetland areas where the WWF-MWP has worked

Western Cape

1 Nieuwoudtville area (2011–2013): Securing the integrity of priority wetlands on the Bokkeveld Plateau by working to strengthen farmer wetland management practices and securing formal biodiversity stewardship agreements. Also developing guidelines with Rooibos farmers for the wise use of wetlands especially rich in biodiversity and rare species.

2 Breede River (2010–2013): Working with local farmers, CapeNature and the Department of Agriculture to assess the condition of wetlands in the upper catchment near Worcester that is rich in biodiversity; developing biodiversity management plans for farmer use; and securing biodiversity stewardship sites.

3 Betty's Bay–Hermanus–Breede area (2010–2013): Capacity development support to CapeNature to evaluate priority wetlands, validate provincial wetland information and strengthen wetland-related capacity within CapeNature.

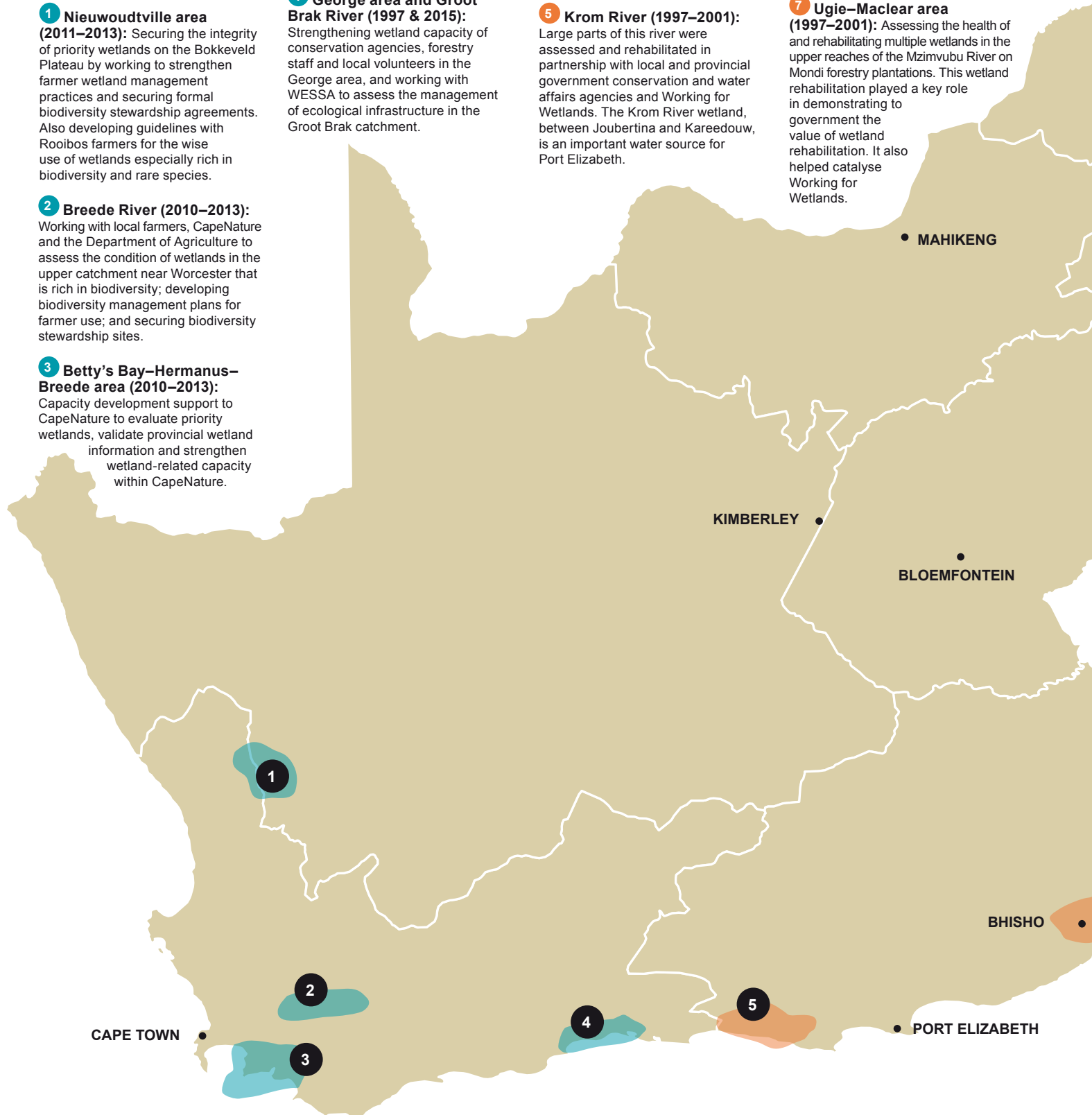
4 George area and Groot Brak River (1997 & 2015): Strengthening wetland capacity of conservation agencies, forestry staff and local volunteers in the George area, and working with WESSA to assess the management of ecological infrastructure in the Groot Brak catchment.

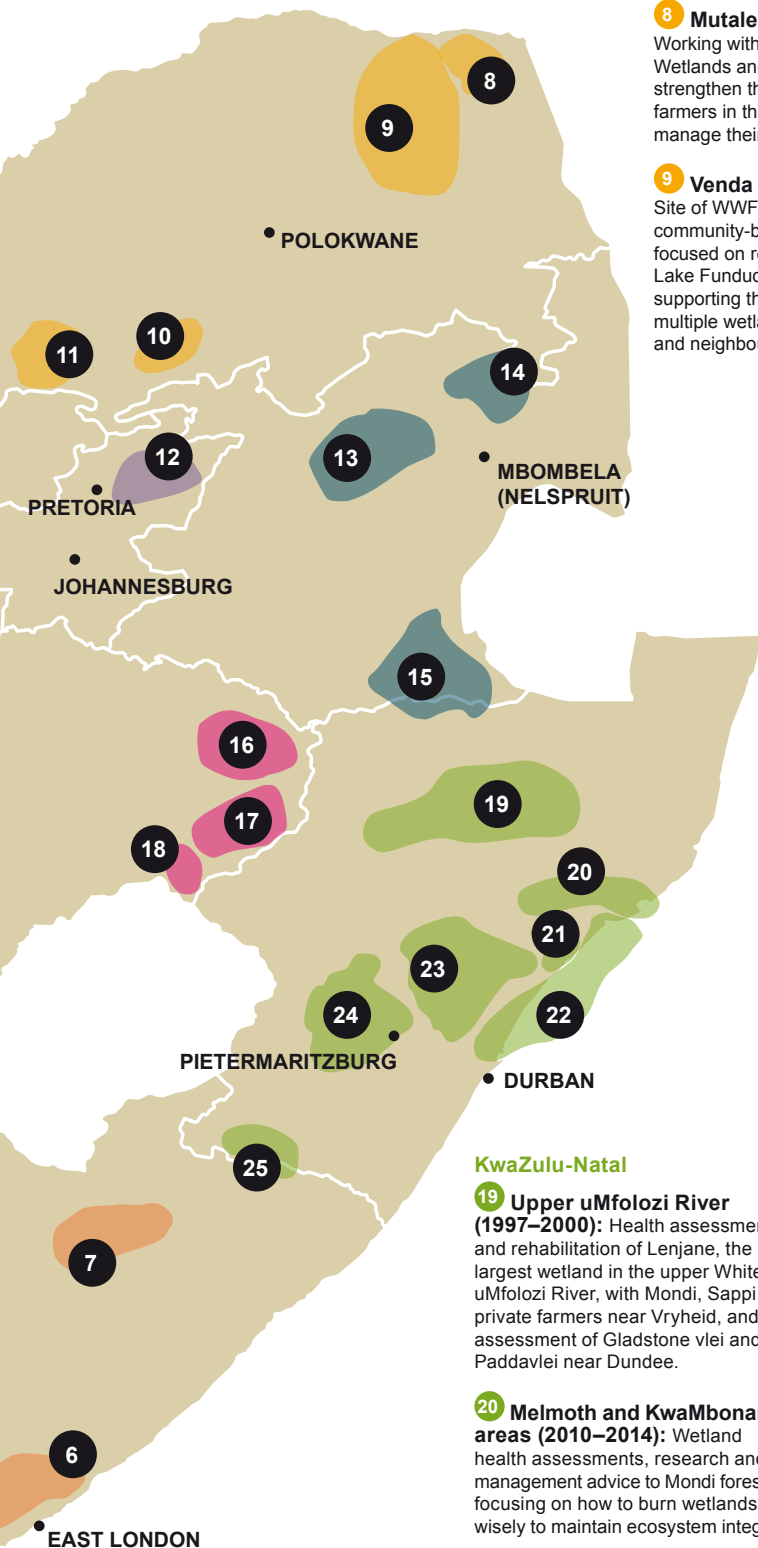
Eastern Cape

5 Krom River (1997–2001): Large parts of this river were assessed and rehabilitated in partnership with local and provincial government conservation and water affairs agencies and Working for Wetlands. The Krom River wetland, between Joubertina and Kareedouw, is an important water source for Port Elizabeth.

6 Amatola area (2001–2003): Wetland health assessments near King William's Town and strengthening of the wetland capacity of staff from Eastern Cape Department of Economic Development and Environmental Affairs.

7 Ugie–Maclear area (1997–2001): Assessing the health of and rehabilitating multiple wetlands in the upper reaches of the Mzimvubu River on Mondi forestry plantations. This wetland rehabilitation played a key role in demonstrating to government the value of wetland rehabilitation. It also helped catalyse Working for Wetlands.





Limpopo

8 Mutale River (2009–2013): Working with AWARD, Working for Wetlands and local communities to strengthen the capacity of communal farmers in the upper catchment to manage their wetland wisely.

9 Venda area (2001–2008): Site of WWF-MWP's eight-year community-based wetland work which focused on rehabilitating the unique Lake Fundudzi and catalysing and supporting the wise use of wetlands at multiple wetland sites all over Venda and neighbouring areas.

10 Nylsvlei wetland (1997–2001):

The health of South Africa's largest inland floodplain was assessed with teams from relevant government departments.

11 Mokolo River–Waterberg (1998–2001): Wetland health assessments and rehabilitation in the upper Mokolo catchment with Working for Water and local farmers. One of the first examples of large-scale wetland rehabilitation which helped to catalyse Working for Wetlands.

Gauteng

12 Elands River (1997–1998): Wetland health assessments with Gauteng Department of Agriculture and Rural Development in the area around the town of Cullinan in the upper reaches of the Elands River.

Mpumalanga

13 Crocodile, Klip and Olifants rivers (1997–2000): Wetland health assessments and rehabilitation of multiple wetlands with Working for Wetlands in upper catchment of three important rivers arising in the Dullstroom/Belfast area with the Endangered Wildlife Trust, farmers and Mpumalanga Department of Economic Development, Environment and Tourism.

14 Blyde and Sand rivers (1998–2000): Health assessments and rehabilitation of multiple wetlands in the upper catchment of these two rivers with Working for Water, AWARD and Mpumalanga Department of Economic Development, Environment and Tourism.

15 Hlelo River (1998–2000): Wetland health assessments and the highly successful rehabilitation of Zoar and Driepan wetland systems with Mondi near Piet Retief.

Free State

16 Klip River (1998–2001): Health assessment and rehabilitation of multiple wetlands in the upper Klip catchment (one of the major water sources for Gauteng) near Vrede, with Rand Water and Free State Department of Economic Development, Tourism and Environmental Affairs.

17 Wilge River (1997–2001): Health assessment and rehabilitation of multiple wetlands in the upper Wilge catchment (another major water source for Gauteng) near Harrismith, with Rand Water and Free State Department of Economic Development, Tourism and Environmental Affairs.

18 Phuthaditjhaba wetland (1999–2000): Health assessments and rehabilitation of this wetland near Phuthaditjhaba in QwaQwa, in partnership with Rand Water and Free State Department of Economic Development, Tourism and Environmental Affairs.

KwaZulu-Natal

19 Upper uMfolozi River (1997–2000): Health assessment and rehabilitation of Lenjane, the largest wetland in the upper White uMfolozi River, with Mondi, Sappi and private farmers near Vryheid, and assessment of Gladstone vlei and Paddavlei near Dundee.

20 Melmoth and KwaMbonambi areas (2010–2014): Wetland health assessments, research and management advice to Mondi foresters, focusing on how to burn wetlands wisely to maintain ecosystem integrity.

21 Mbongolwane wetland (2001–2004): Supported the communal wetland users of this important wetland near Eshowe to improve the wise use of wetland resources through capacity building and rehabilitation initiatives. This work was done in partnership with the University of KwaZulu-Natal and Working for Wetlands.

22 Durban to Richards Bay coastal areas (1991–1995): Extensive work with Ezemvelo KZN Wildlife and sugar farmers (among others) during the beginning of the WWF-MWP; developing wetland assessment and management techniques which led to the development of the Wetland Fix series of field guides.

23 Midlands North area (2002–present): The core area where the WWF-MWP has focused its work with the sugar industry, first co-developing and then, in partnership, implementing SUSFARMS® – an innovative farm management system for sustainably grown sugar.

24 Mooi, uMngeni and Umvoti rivers (1996–present): Working in the upper reaches of these catchments has been a core area of the WWF-MWP's work over the past 20 years. Many thousands of hectares of wetlands and riparian areas have been assessed and rehabilitated with multiple government, NGO, communal and private land users. Currently the WWF-MWP focuses on catalysing and supporting improved water stewardship practices with the plantation forestry and dairy industries and their associated value chain organisations.

25 Ntsikeni wetland (1997–2001): Assessment and rehabilitation of the Ntsikeni wetland in partnership with Eastern Cape Department of Economic Development and Environmental Affairs and Working for Wetlands. The groundwork was completed for gaining Ramsar status for the wetland.

Map not to scale



25 reasons



To celebrate

Catalysing a wetland community of practice

Chapter 1

01 Starting in KwaZulu-Natal with Wetland Fix

In the late 1980s, wetlands in South Africa were highly neglected and the Lake St Lucia estuary and wetland in KwaZulu-Natal were being threatened by proposed dune mining. The campaign to “Save St Lucia” sparked widespread interest in wetlands and generated a much greater appreciation of the many benefits and ecosystem services these areas provide.

WWF-SA took advantage of this changing environment in KZN, where researcher and ecologist Dr George Begg had completed a wetlands survey documenting significant damage to these key ecosystems. Based on Begg’s work, WWF-SA’s chief executive at the time, Dr Allan Heydorn, WESSA conservation director Keith Cooper and Advocate Louis Nel, for Rannies, joined forces in 1991 to establish what is now known as the WWF-Mondi Wetlands Programme (WWF-MWP). Rannies became involved because its Western Cape premises were immediately adjacent to the small but important Paarden Eiland wetlands, also known as Zoarvlei, in Cape Town.

Ezemvelo KZN Wildlife (then the Natal Parks Board) was chosen as the implementing agent. “WWF-SA always uses effective organisations to execute work and Jon Wyatt, one of the Board’s keen young officers, was very interested in rehabilitating damaged wetlands,” recalls Dr Ian Macdonald. Soon after his appointment as WWF-SA’s conservation director in January 1992, Macdonald initiated a survey that confirmed wetlands as a top national conservation priority.

Wyatt duly became South Africa’s first – and for a while only – full-time wetland conservationist working outside protected areas, tasked with

sharing the importance of sustainable wetland management with key stakeholders. “It was Jon who developed the Wetland Fix tool. He went way beyond his duties and spent a lot of time in discussion with farmers. He was really passionate about wetlands,” says Cooper.

Wetland Fix was the most significant outcome of the first five-year period of this wetland pilot project. Six illustrated field guides offered landowners highly practical information on how to assess, manage and rehabilitate their wetlands.

Wyatt worked closely with agricultural and conservation extension officers and farmers to develop the field guides. Wetland Fix was very well received and its success helped to motivate the decision to take the wetland pilot project national in 1996.





Above left and right: David Lindley in the field with members of the media.

02 Going national with the wetland message

Wetlands? Mosquito-infested swamps with no redeeming features that should be drained as quickly as possible! That would probably have been the response of an average South African when asked about wetlands in the mid- to late 1980s before a general environmental awareness slowly started taking root.

“Before the WWF-MWP came into existence, wetlands were poorly understood. Although a shift in government policy had begun to take place, the focus was mainly on the importance of wetlands as habitat for fauna and flora, particularly for waterbirds,” explains wetland consultant and WWF-Mondi Wetlands Programme (WWF-MWP) associate, Dr Don Kotze.

A critical part of the WWF-MWP’s work was to inform and educate the public about the real value of wetlands, and to get them to support wetland conservation.

One of the ways in which the WWF-MWP set about doing this was through a sustained media campaign lasting over a decade. This campaign included a steady stream of press releases, radio soundbites, television interviews, a video production and guided visits to key sites where the WWF-MWP was supporting and advising on

rehabilitation efforts. From 1996, the programme also ran a double-page spread in every edition of WESSA’s journal *African Wildlife*, looking at different aspects of wetlands.

The strategy was to make sure that wetlands were being explained in layperson’s terms in the media by cutting out all the scientific jargon and addressing the question “what do wetlands mean to me as an ordinary person?”

A decade after the programme started, WWF-MWP manager Dr David Lindley was able to write: “Ten years ago hardly anybody knew what a wetland was, let alone the importance of wetlands in our lives. Now it has become one of the hottest environmental issues, with the government willing to support conservation efforts.”

03 A new generation of ‘wetlanders’ is born

Back in 1996, working in the field of wetland conservation in South Africa was a lonely job. For several years there was only one programme manager working full-time on practical wetland conservation outside protected areas.

One of the key early tasks for the WWF-Mondi Wetlands Programme (WWF-MWP) was to catalyse interest in wetland conservation around the country by involving as many people as possible, from all walks of life.

This was done by WWF-MWP manager Dr David Lindley, who undertook a six-month road trip around South Africa, gathering ideas from everyone who had anything to do with wetlands. One of those ideas was to use surveys to assess the state of wetlands. “Assessing wetlands is vital, because how can we conserve or rehabilitate wetlands if we don’t know where they begin or end? Surveys were the vehicle that helped people understand and value wetlands,” he says.

Participants from the government, companies, NGOs and members of the public were invited on week-long field trips. During these trips, groups of about 15 volunteer field trainees would spend two days getting a basic understanding of wetland dynamics and how to assess their condition, followed by three days of walking through wetlands and assessing them. “It was very practical – we walked hundreds of kilometres, showing people how to delineate wetlands. We all had soil augurs, and it was exciting to discuss things ... that’s how we learnt. Learning by doing is incredibly powerful,” says Lindley.

Surveys were run for almost eight years and all the effort paid off. **Among the many successes of the survey initiative was the emergence of a new generation of “wetlanders”: passionate enthusiasts who tramped and splashed their way through surveys covering more than 40 000 hectares of wetlands.**

People began to understand wetlands better and, most importantly, how to begin rehabilitating degraded wetlands.

John Dini, at the time the government’s wetland “point man” in the national Department of Environmental Affairs and Tourism, accompanied many of the surveys. “It was where I cut my teeth as well,” he recalls. “Putting my feet into the mud was a unique opportunity for me to learn.” Free State Conservation ecologist Nacelle Collins adds: “So many people participated in those surveys, it was almost like a training ground. And many of the older colleagues in the wetland business today were all part of those early surveys.”

Putting my feet into the mud was a unique opportunity for me to learn.

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Right: Surveying wetlands in the late nineties with extension staff from the Department of Agriculture.

04 Delineating wetlands to kick-start wetland conservation

Trees need water, and commercial plantations are water-intensive. So when South Africa's new government came into being in 1994, with its focus on social and economic equity (including access to water), the forestry industry was identified as a major water user.

Wetlands were a particular focus because the early forestry plantations were seen as not compatible with wetlands. In the previous political era, many seasonal wetlands had been planted to tree plantations (some accidentally, some deliberately), drying up these areas in the process. In a water-scarce country, where demand is rapidly outstripping supply, that is a problem. The "plantations in wetlands" issue was a challenge for the industry, for downstream water users, and for the economy as a whole.

Early legislation included the new Water Act of 1998 that, among other things, classified forestry plantations as a Stream-Flow Reduction Activity (SFRA) and introduced controls that impacted plantation activities. In addition, the late Kader Asmal, the Minister of Water Affairs and Forestry

at the time, placed a moratorium on new forestry plantings pending negotiations to establish a more water-friendly procedure for granting and managing afforestation permits.

"This moratorium on any new plantings had a direct and immediate impact on the forestry industry," recalls Peter Gardiner, Mondi Group's natural resources manager.

Changing consumer awareness and environmental considerations globally also meant the South African timber industry was facing growing international pressure to produce timber in a more environmentally sustainable way. With 300 000 hectares allocated for future planting at risk, the industry was urgently seeking a solution.



Right: A wetland that has been delineated with the plantation trees cut out of the buffer zone.

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John Dini, assistant director for biodiversity planning in the national Department of Environmental Affairs and Tourism between 1997 and 2003, says the need to secure sustainable fibre, and the economic realities of losing access to certain markets unless certified by the FSC® (Forest Stewardship Council®), is what brought the forestry industry to the negotiating table in the first place.

Gardiner was one of the key industry players in the negotiations that followed, and WWF-MWP manager Dr David Lindley the first to ask how the opposing sides could cooperate, rather than fight.

What exactly had to be negotiated? Wetland ecologist Dr Don Kotze explains that **there was general agreement that the forestry industry needed to improve its management of wetlands, particularly by withdrawing plantations from wetlands and their immediate surrounds. “But a key stumbling block to implementing this was a lack of an agreed-on, scientifically defensible method for delineating the boundary of a wetland,”** says Kotze.

Over the next five years – thanks to a highly experienced technical team comprising Keith Snyman (soils), Don Kotze (wetland ecology and soils), John Dini (wetland ecology), David Lindley (wetland ecology), Peter Roberts (hydrology), Peter Gardiner (forestry) and other researchers – a method for delineating wetlands based primarily on hydromorphic soils and hydrophytic vegetation was agreed on. “It was really just a bringing together of minds to find a practical delineation procedure with workable buffer areas,” Gardiner remembers.

Buffer zones

Agreeing on appropriate buffer zones for delineated wetlands proved particularly difficult, partly because increasing any buffer by even a small amount quickly adds up to a substantial area and hence a substantial loss of plantation forestry income. But the fact that most of the industry had previously commissioned a comprehensive soil survey of its land holdings as well as detailed hydrological surveys, paved the way for an eventual agreement. “The soil data supported by vegetation data was absolutely fundamental, a ‘Eureka’ moment for us,” Gardiner says.



Left: The variation in soil colour distinguishes dryland soils (yellow to brown) from wetland soils (dark brown, grey or black).

It was really just a bringing together of minds to find a practical delineation procedure with workable buffer areas.

With the solution at hand, Mondi and the WWF-MWP played a critical role in bringing together the various stakeholders, including Forestry South Africa (FSA), and the many layers of government at national and regional level. With the full support of FSA, Mondi led the way and the industry has already collectively withdrawn commercial trees from thousands of hectares of wetlands and their buffer zones. This process continues today.

DELINEATION

The concept and principles of wetland delineation evolved in forestry and were written into industry standards and government guidelines. Since then, wetland delineation has been applied right across the spectrum of land uses and is one of the key wetland management tools in South Africa.

“It’s the first step in any impact assessment – it’s really the basis of environmental management relating to wetlands,” says Damian Walters, a former WWF-MWP staff member and now an independent specialist wetland researcher and consultant.

Delineation is “pretty simple”, he adds. It takes a systematic approach to finding the edges of a wetland with a fair degree of accuracy, using well-established indicators like soil colour and the presence or absence of wetland vegetation. This in turn allows the investigators to begin to understand the hydrology of the wetland and the ecosystem services it delivers.

Because wetlands are so important in water conservation, the National Environmental Management Act 107 of 1998 says that determining their presence or absence is one of the first requirements when doing environmental assessments across land uses.

05 Creating the legal framework for wetlands

It is widely known that watertight legal definitions are at the heart of meaningful legislation. But what, exactly, is a wetland?

Politicians, programme managers and conservationists all understand that appropriate tools, action plans and strategies, championed by passionate, knowledgeable people, are essential to implementing legislation effectively. Wetland conservation is a good case in point.

By the late 1990s, an estimated 50% or more of South Africa's wetlands had been destroyed and many of the remaining ones were severely threatened by agriculture, mining, afforestation and urban and industrial development. This was partly because there was no legal definition of a wetland through which to enforce conservation measures.

Starting in 1996, one of the priorities for the WWF-Mondi Wetlands Programme (WWF-MWP) was to solve this problem. Other priorities were to legally delineate wetland and buffer areas, get wetland conservation incorporated into the government's formal water policy, and lobby key decision makers to dedicate more resources to wetland conservation.

The timing was serendipitous. Wetland expert John Dini, the then "go-to" official at the Department of Environmental Affairs and Tourism, remembers that 1996–1997 was a formative time for the new National Water Act. "We needed a definition of a wetland in the Act, and around that time we were also working on wetland delineation guidelines," he says.

The WWF-MWP undertook extensive lobbying, pushing hard for a far more cohesive approach to wetland conservation. Its efforts were highly successful: in both the new National Water Act of 1998 and the revised Conservation of Agricultural Resources Act (CARA) Regulations of 2001, the definition of a wetland was amended to a tight, unambiguous, legally defensible regulatory definition.

Barbara Schreiner was chief director: Water Use and Conservation at the Department of Water Affairs and Forestry during this crucial period, and had been involved in both the writing of the White Paper on a National Water Policy and the drafting of the new Water Act. "The National Water Act recognised not only the use of water but the need to protect water resources and aquatic ecosystems, including wetlands," she says.

By 1999, the WWF-MWP could already report that government departments were beginning to include wetland management in their programmes and that key political decision makers were starting to realise the importance of wetlands. Also, the programme's lobbying efforts had resulted in four (and a year later five) full-time wetland ecologists being appointed to work in four different government departments where they started their own wetland conservation programmes.

In 2001, then Water Affairs and Forestry Minister Ronnie Kasrils congratulated the programme and added: "I want to voice my commitment to work towards ensuring that we protect wetland systems for the multiple benefits you articulate."

The National Water Act recognised not only the use of water but the need to protect water resources and aquatic ecosystems, including wetlands.

'wetland' means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil (National Water Act 36 of 1998, s 1(1)).

06 Rehabilitating wetlands: early successes

Wetland rehabilitation can seem miraculous to those witnessing the return of life-giving water to a “dead” ecosystem and the subsequent explosion of new life. However, the reality is that such miracles of nature must be facilitated.

Mondi was the first large private landowner in the country willing to become involved in wetland rehabilitation and, through the WWF-Mondi Wetlands Programme (WWF-MWP), made significant investments in rehabilitating thousands of hectares of wetlands in plantations in Mpumalanga, the Eastern Cape and KwaZulu-Natal (KZN).

Mondi's rehabilitation efforts began in 1998 with a small but very important wetland called Lenjane in the uMfolozi catchment in northern KZN that had been reduced by 42% as a result of agriculture and forestry. Many projects followed, but **the first really significant success story was the Zoar wetland near Piet Retief in Mpumalanga**. This wetland had been drained for dryland agriculture and remained unflooded for 60 years, sprouting just blackjacks, dryland grasses and a few sedges in a channel.

The WWF-MWP conducted a survey confirming that this really was a wetland. As a result, Mondi initiated a major rehabilitation operation, removing alien trees, plugging the massive drains, adding culverts and causeways for roads, and re-establishing appropriate buffer zones for plantations.

The work took nearly two years to complete, and then, fortuitously, just days later, the rains started and in less than a month the entire wetland area of 450 hectares had flooded for the first time in six decades. Delighted conservationists witnessed the return of white-faced ducks, the endangered crowned cranes and other wetland birds, while wetland plant species sprouted.

Themba Vilane, forestry operations manager for Mondi South Africa, describes the rehabilitated Zoar wetland as “a good example of what we can do as industry”. He explains that Mondi led the development of guidelines that are now used to delineate wetland areas for new planting licences, and that they voluntarily withdrew their plantations from many unsuitable areas.

“Mondi was one of the pioneers in the industry, using scientific soil profile methods to determine wetland boundaries, even though at the time this was not required by legislation. If you look at the work we did, and continue to do, we’ve led the industry, set the standards, encouraged others to join us – and all this has made a meaningful contribution to increasing the water reserve in catchment areas,” Vilane says.

*Below left and right:
Zoar wetland, before and
after rehabilitation.*



BEFORE

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AFTER

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07 Building a wetland community of practice

The mid- to late 1990s was a time when wetland work was burgeoning, particularly because of the decision to take the wetland pilot project national in 1996. The Working for Water programme was also starting to get involved in wetlands, although it had not yet institutionalised the Working for Wetlands programme.

While there were some key academics dedicated to wetland science – among others, professors Charles Breen and Fred Ellery, then both at the University of KwaZulu-Natal (UKZN) – there were very few wetland field specialists available to advise, manage and coordinate wetland work on a practical level, particularly on projects outside protected areas.

Dr Don Kotze began his postgraduate studies on wetlands at UKZN in 1991, the same year the WWF-MWP was initiated. “For the first few years we would occasionally work together informally, in what was to grow into a very rewarding journey for me,” he says. “This included getting out into the field, ‘walking the wetlands’ together and throwing ideas around. We were all on a steep learning curve.”

John Dini, assistant director for biodiversity planning in the national Department of Environmental Affairs and Tourism between 1997 and 2003, recalls that the phrase “wetland community of practice” did not even exist at the time, but “there was a real sense that no one had all the answers and that we needed to figure it out together”.

The informal meetings of this handful of wetland practitioners turned into a new community of practice of wetland specialists, leading to the formation of the South African Wetland Action Group (SAWAG). This in turn expanded into the National Wetlands Indaba, which now attracts hundreds of professional participants every year. Thus a new generation of wetland conservationists was born.

The Indaba in particular became a focal point for bringing local young people, mostly project or provincial coordinators from Working for Wetlands, into the growing wetland community of practice, making it more racially and gender representative.

Anton Linström from Mpumalanga Parks Board explains that because the nature of wetlands differs

between bioregions, there were no hard-and-fast rules they could apply in the early days. “We realised then that we all depended on one another, and that to understand wetlands we had to learn together. That was the beauty of the wetland community. We got on very well and we supported one another. Now there are hundreds of people involved.”

NATIONAL WETLANDS INDABA

In 1996, five colleagues started meeting informally in the KZN Midlands to discuss their mutual interest in wetland conservation. These passionate environmentalists could not foresee that their discussions would result in a formal National Wetlands Indaba that has been held every year since then and now attracts around 200 delegates from a wide variety of disciplines within South Africa's broader wetland community.

The Indaba aims to “discuss issues, share experiences and explore solutions”. This cross-disciplinary gathering of wetland practitioners includes scientists, decision makers, conservationists and environmental educators.

In a parallel initiative, eight provincial wetland forums were established in 2000 (predominantly through the WWF-MWP and the Working for Wetlands programme) as platforms where corporate governance issues relating to wetlands – like rehabilitation plans – could be coordinated. These forums have assumed the role of hosting the Indaba on a rotational basis.

The South African Wetland Society was formally established on 25 May 2012 with the aim of promoting standards and quality of wetland work through the professional development of practitioners.

Dr Piet-Louis Grundling, chair of the society's board of trustees and deputy director of wetland programmes at the national Department of Environmental Affairs, says the Indaba has become “really significant” over the years, particularly as fertile ground for wetland students to gather ideas and get feedback.

08 Working with the Ramsar Convention on Wetlands

Nestling within the Ntsikeni Nature Reserve in southern KwaZulu-Natal is a biological and ecological gem: the Ntsikeni wetland. Awarded Ramsar Wetland Site status in 2010 to confirm its global importance, Ntsikeni is the largest high-altitude wetland in South Africa and a very important breeding site for the critically endangered wattled crane, among other significant wetland-dependent species.

Despite Ntsikeni being declared a nature reserve, more than 200 people and their livestock settled there in the early 1990s, remembers Div de Villiers, a champion of nature conservation in the Eastern Cape, who was manager of the 9 200-hectare reserve from 1996 to 2004.

“In 1996 we established a joint management forum with local traditional leaders and together agreed on a relocation plan for the people,” De Villiers says. “We began assessing the health of the wetland with the WWF-Mondi Wetlands Programme (WWF-MWP) shortly thereafter, and the local community benefited greatly through employment once we started the rehabilitation with Working for Wetlands.”

In 2004, ownership of Ntsikeni was transferred to Ezemvelo KZN Wildlife and the Ramsar Site application, initiated by WWF-MWP associate Dr Don Kotze, was successfully concluded.

Although it was not directly involved in the final Ramsar application, the WWF-MWP made a major contribution to achieving

Ramsar status for the 1 100-hectare Ntsikeni wetland through a wetland health assessment, helping with rehabilitation, developing a management plan and commissioning the reserve’s draft Ramsar information sheet.

Over the years the WWF-MWP has also supported the Ramsar Convention on Wetlands. This included providing the framework for a guide to integrating wetlands into catchment management strategies, called “Guidelines for integrating the protection, conservation and management of wetlands into catchment management planning”. Ramsar recognised the importance of this tool and adapted it for implementation by contracting parties to the Convention all over the world.

*Below left and right:
Ntsikeni wetland in
southern KwaZulu-Natal.*

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09 Catalysing Working for Wetlands – the dream is realised

It was the phone call that those involved in the WWF-Mondi Wetlands Programme and their partners had been dreaming about: “Okay, you’ve got R1 million. You’ve got six months to spend it, prove to me that you can rehabilitate wetlands.”

The caller was Dr Guy Preston, national head of the government’s Working for Water programme. The money was to be spent on wetland rehabilitation in QwaQwa in the north-eastern Free State, and it was a key test for the WWF-MWP: if the project worked, more money would be forthcoming from Working for Water. The rehabilitation work was done by engineering consultants in consultation with Free State Conservation and the WWF-MWP, and fortunately it did prove successful.

There had been an earlier test in mid-1998 when Preston tentatively allocated R150 000 to Working for Water to rehabilitate wetlands in the upper Mokolo River in Limpopo. Working for Water staff did the rehabilitation work with close support from the WWF-MWP. Despite a very tight six-month schedule, the project was a success.

Convincing the government to become directly involved in critical wetland rehabilitation work and to provide funding was crucial in the history of wetland conservation. Vincent Bath, then chief executive of Rand Water, argued that the focus of the Working for Water programme – started in 1995 to control water-thirsty invasive plants – should be expanded to wetland conservation because of the similar impacts of wetland degradation on water security.

In its first year, Working for Water had rehabilitated a floodplain wetland in the Seekoeivlei Nature Reserve near Memel in the eastern Free State using Rand Water funding. The parastatal also provided funding for the first major wetland rehabilitation project outside a protected area: the 1998 rehabilitation of nine wetlands on farming

land in the upper Wilge River near Van Reenen’s Pass, previously surveyed by the WWF-MWP. Free State Conservation and construction consultants did the actual rehabilitation, employing 200 people for five months at a cost R2.6 million.

Crucial to lobbying for a Working for Wetlands initiative was proof that degraded wetlands could indeed be successfully rehabilitated. This is where Mondi played a major role as the WWF-MWP had been working with their foresters, doing wetland rehabilitation near Piet Retief in Mpumalanga and in the Eastern Cape near Ugie. Mondi and Rand Water were the two key catalysts, providing evidence that helped convince Working for Water to establish Working for Wetlands as a subsidiary programme.

John Dini, then assistant director for biodiversity planning in the national Department of Environmental Affairs and Tourism, managed the Working for Wetlands programme from 2004 to 2013. He says a critical factor enabling their success was the significant number of wetland health surveys that had already been completed by the WWF-MWP, providing a wealth of detail on what rehabilitation needed to be done and where.

The cumulative budget of Working for Wetlands is over R1 billion and the programme currently provides work opportunities for about 2 400 people annually. Dini calls it “a tremendous success story” and says the WWF-MWP was one of its major catalysts.

Preston describes Working for Wetlands as “a flagship programme” of government and the Expanded Public Works Programme (EPWP), and notes that it is still collaborating closely with the WWF-MWP.

A significant R100 million was raised for wetland rehabilitation in the crucial three-year period following the establishment of Working for Wetlands, giving the WWF-MWP the boost it had been working towards since 1996.

Facing page: A Working for Wetlands team rehabilitating a wetland.

There was a real sense that no one had all the answers and that we needed to figure it out together.



WORKING FOR WETLANDS

After years of management under the South African National Biodiversity Institute (SANBI), the Working for Wetlands Programme was transferred to the Department of Environmental Affairs (DEA) on 1 April 2015. Today the programme is part of the expanded Natural Resource Management initiative within the DEA with an annual budget of R118 million and 14 full-time staff, providing about 2 400 job opportunities for previously unemployed people every year.

Umesh Bahadur, director of the DEA's wetland programmes, explains that they are in the process of creating a structure with three major components: the familiar Working for Wetlands work that averages 40 rehabilitation and restoration projects a year across all nine provinces; expanding the monitoring and compliance enforcement capacity; and collecting and interpreting data.

Rehabilitation and restoration projects now tend to be part of a catchment-wide initiative and last typically two to three years, but sometimes even four years depending on the nature of the work. "We do this because we want to keep people employed for as long as possible, and because of the value we derive from catchments," Bahadur explains.

Consolidating and expanding wetland work

Chapter 2

10 Supporting the sugar industry to strengthen environmental and social practices

Wetlands can play a critical role on farms in terms of water security, biodiversity and even crop resilience.



Above: The SUSFARMS® guideline book.

A group of innovative sugarcane farmers in KwaZulu-Natal (KZN) recognised that wetlands were not “inconvenient hydrological landscapes” – areas to be drained and “restored” for more productive uses – and that, by looking after wetlands, they could reduce the environmental impact of their agronomic practices, especially on water resources.

For nearly a decade they worked with the WWF-Mondi Wetlands Programme (WWF-MWP) and other stakeholders in the industry to develop a sustainable farm management tool called SUSFARMS® (the Sustainable Sugarcane Farm Management System®). The system is designed to help the sugar industry move towards more environmentally and socially responsible agricultural practices, while maximising the economic sustainability of farms. SUSFARMS® is one of the many successes the WWF-MWP has achieved over the last two decades.

Vaughan Koopman, who has managed WWF-MWP’s sugar work since 2002, says for the first few years their work focused on building the trust of industry leaders, millers and farmers, and fostering an understanding that the environment and responsible production are the joint responsibility of all stakeholders.

Once a level of trust had been established, the WWF-MWP team saw an opportunity to work with farmers who were already champions of sustainable

agriculture. This helped to galvanise other farmers and the rest of the industry to become involved.

For Inge Kotze, WWF-SA’s senior manager for sustainable agriculture, one of the key challenges was keeping the core group of stakeholders motivated. However, respected farmers really helped in the implementation of SUSFARMS®. Christelle Marais, regional sustainable development specialist at SABMiller, also acknowledges the role the farmers played in getting the initiative off the ground and making it a success. **“What impressed me about SUSFARMS® is the bottom-up approach – farmers identified the need to develop their own sustainable agricultural practices. We really support what they’re doing.”**

One of the farmers is Lotar Schulz, who has been farming sugarcane and timber in the KZN Midlands since 1975. In the early 2000s, Schulz and a few other farmers in the area started exploring ways to farm more sustainably. They welcomed the chance to collaborate with the WWF-MWP in 2003 on the development of SUSFARMS®.

Schulz cites his passion for sustainable farming as a key driver and motivator. “Without passion you have no energy and without energy you have nothing.” The support they received from South African Sugarcane Research Institute (SASRI) extension officers was invaluable, he says.



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Above: Champion sugarcane farmer Lotar Schulz.

It would be great to see a greater uptake across all sugar regions in South Africa and the SADC region...

Getting the right people together

Industry bodies like the South African Sugar Association (SASA) were instrumental in getting SUSFARMS® off the ground. Marilyn Govender from SASA says, "People in the industry acknowledge that WWF is a credible body and that it wants to work with and not against sectors. The organisation has earned that respect from the industry."

Kotze believes the WWF-MWP was instrumental in getting the right people together, creating a safe space to frame common issues and helping them to gather information. As a result, key parts of the sugar value chain willingly got involved in improving sustainability practices on the ground – from the Midlands North Growers Associations (UCL, Noodsberg and Eston), to the millers (Illovo), industry (SASA and SASRI) and the market (SABMiller on behalf of The Coca-

SUSFARMS®

Sugarcane is a high water user, and with South Africa among the world's largest sugar producers, the local industry has come under increasing pressure to improve farming practices relating to water use.

Sugarcane growers themselves, particularly in the KZN Midlands, became increasingly aware of the need to reduce their impact on ecosystems and the services these systems deliver.

This growing awareness and cooperation led to the formation of the Sustainable Sugarcane Farm Management System® (SUSFARMS®) initiative to implement and monitor best practice related to environmental, social and financial issues in the sugarcane production industry. In the KZN Midlands, this is a joint initiative by WWF-SA, Solidaridad, the grower associations, sugarcane millers, and SABMiller with support from the South African Sugar Research Institute (SASRI).

SUSFARMS® Midlands coordinator Janet Edmonds explains that the initiative works through a two-pronged approach: a guideline, and an extension programme supporting the implementation of the guideline. The guideline is a comprehensive manual containing economic, social and environmental principles for every aspect of sugarcane production. It also includes a self-audit sheet.

About 350 commercial farmers in the KZN Midlands are currently implementing the SUSFARMS® system. Implementation will expand on an industry-wide basis, including to the north and south coasts of KwaZulu-Natal.

Cola Company), she says. Marais agrees that SUSFARMS® is a great example of NGOs, suppliers and customers working together to find sustainable solutions.

Kotze says she would like to see SUSFARMS® used as the basis for good land-use planning, and responsible, measurable farm production practices. "It would be great to see a greater uptake across all sugar regions in South Africa and the SADC region, and to get global endorsement from BONSUCRO™, the only global sugar standard for sustainability."

One of the biggest benefits of the project is that all growers are up to date on legal requirements, and have developed better management practices, says Schulz. He would encourage farmers in other industries to consider adopting sustainable farming practices.

11 Wetland tools to support learning and practice

Throughout its 25-year history, the WWF-Mondi Wetlands Programme has led the way in developing various technical and social tools to enable wetland management practices.

Wetland Fix

Wetland Fix was the most significant outcome of the first five-year period of the WWF-MWP. The six illustrated field guides offered landowners highly practical information on how to assess, manage and rehabilitate their wetlands. The WWF-MWP team worked very closely with farmers and agricultural and conservation extension officers to develop the field guides. Wetland Fix was very well received and its success helped motivate the decision to take the wetland pilot project national in 1996.

WET-EcoServices and Wet-Health

WET-EcoServices was designed to assess how wetlands provide ecosystem services to society. The tool has been widely used in South Africa for state-of-the-environment reporting, wetland rehabilitation planning, ecological reserve determinations, training and scoping-level environmental assessments. It has also been used in other African countries including Lesotho, Uganda and Mali.

Below: Sugarcane farmers learning about wetland and catchment management.



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The WET-Health tool evaluates the health of a wetland and its projected trajectory of change by looking at hydrology, geomorphology and vegetation.

These two tools form part of the WET-Series, a collection of 11 volumes of wetland educational and technical tools. The series was co-funded by the Water Research Commission (WRC) to provide practical guidelines on the assessment, rehabilitation and management of wetlands and riparian zones. Bonani Madikizela, WRC's research manager, says the WRC is proud of the WET-Series, a project that changed the face of wetland management in South Africa and beyond. "We continue to enhance the tools based on feedback from wetland practitioners who use the tools in their everyday work," she says.

WET-EcoServices and WET-Health are the most widely used tools by the wetland community of practice today.

Windows on our World: Wetlands (WOW)

The Windows on our World: Wetlands (WOW) tool is one of the most innovative and useful tools to be produced by the programme, says Michelle Hiestermann, former WWF-MWP staff member and specialist in informal adult learning. "This tool is a brilliant way of engaging a variety of stakeholders from different backgrounds on catchment and wetland issues. It's about bringing people together to learn and effect change for the good of wetlands."

The tools were developed in partnership with a wide range of stakeholders and supporters: the WRC; Working for Wetlands; the Department of Water and Sanitation; Wetland Consulting Services; the University of KwaZulu-Natal; the Free State Department of Economic Development, Tourism and Environmental Affairs; the Institute of Natural Resources; Mondi; Sappi; Ezemvelo KZN Wildlife and Land Resources International.

12 Supporting the wise use of communal wetlands

People living in poor rural areas are dependent on the life-supporting functions of wetlands. These ecosystem services include clean water, food, fibre supply and buffering against drought. But despite this, South Africa's wetlands in communal rural areas have historically received little attention from conservation organisations.

Vhangani Silima, a former WWF-Mondi Wetlands Programme (WWF-MWP) staff member, initiated the community wetland management initiative in 2001 and spent eight years leading this work, implementing a number of projects. "The most fulfilling part was realising that, through community work, the WWF-MWP was indirectly addressing important issues affecting society, such as unemployment and the shortage of water."

Silima worked mainly in Limpopo province, but together with the local government coordinators, he would often visit KwaZulu-Natal (KZN) to learn from the conservation and rehabilitation work that was being done by WWF-MWP associate Dr Don Kotze on the Mbongolwane wetland near Eshowe. They would exchange ideas and then apply what they had learnt by teaching other members in the community to do wetland rehabilitation work.

Below: A woman practising subsistence farming in a communal wetland.

Silima also learnt a lot from an innovative wetland programme being run by an NGO called AWARD (Association for Water and Rural Development) in Mpumalanga. AWARD started supporting communities to use their wetlands wisely in response to issues noted by the government-led Working for Wetlands programme. **AWARD trained community resource monitors, who are supported through the Extended Public Works Programme (EPWP), to act as mentors for others in the community, thus improving the livelihoods of communities and establishing a culture of custodianship. This was an innovative five-year partnership between the WWF-MWP and Working for Water.**

Silima's work predominantly involved working with community members to facilitate a deeper understanding of the dynamics of wetlands and how to use these areas more wisely. This involved assessing wetland health and supporting wetland rehabilitation through the Working for Wetlands programme.

There were inevitable challenges such as bringing together traditional authorities, politicians and government officials, and learning to communicate with people who have different priorities.

But the success achieved made it all worthwhile. A good example is the work done in collaboration with the local rural tribal communities at Lake Fundudzi in Limpopo. The project promoted the rehabilitation of degraded wetlands that supply water to the sacred lake. At the same time, it inspired and enabled government institutions, such as LandCare and Working for Wetlands, and local communities to work together to manage the lake wisely.



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13 Growing young wetland and environmental professionals through an internship programme

The WWF-Mondi Wetlands Programme internship programme has played a leading role in growing young wetland and environmental professionals, with two to three interns joining every couple of years as the older interns moved on to start their professional careers as environmentalists.

The WWF-MWP programme supported incumbents to complete a wetland-related Master's degree while they gained work experience and made the most of networking and mentoring opportunities.

A good example is Linda Luvuno, an environmental science student from Mpophomeni, a small township in Howick, KwaZulu-Natal. "Before I joined the WWF-MWP, I was considering doing an MSc but I didn't think I could afford it. WWF-MWP staff visited the department to source students to do research internships. That's where we met and our journey began," Luvuno says.

Michelle Hiestermann, former WWF-MWP staff member, says the internship programme was an important highlight for her. "There's a huge need for skilled graduates in the water and wetland field, but ironically it is difficult for graduates to find work in the environmental sector.

"All the professional WWF-MWP staff members were undertaking their own postgraduate studies and by supporting each other's research we could learn from one another. The nature of our work also allowed for fascinating inter-disciplinary research topics," says Hiestermann.

Luvuno, who is now pursuing a PhD at Stellenbosch University's Department of Conservation Ecology and Entomology, says the best part of the internship was being introduced to wetlands.

Another former intern, Nokuthula "Noks" Dubazane, is passionate about exploring the impact of the environment on the livelihoods of people. She joined the WWF-MWP as a research intern and then enrolled for a Master's degree at Rhodes University. "As an intern I not only got to

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Above: Former WWF-MWP interns Linda Luvuno (left) and Noks Dubazane (right).

do my Master's work but could also help out with practical in-field development work in the Makuya community in north-eastern Limpopo," she recalls.

Dubazane was subsequently employed as programme officer for a year. The experience has been invaluable in her current job as an environmentalist for the eThekwin Municipality.

One of the great successes of the programme is that all the interns have taken advantage of career opportunities where they continue to be outstanding ambassadors for the environment, and in many cases, wetlands.

As an intern I not only got to do my Master's work but I could also help out with practical in-field developmental work.

14 Championing social learning for collaboration and social change

Social learning has become increasingly important to the work of the WWF-Mondi Wetlands Programme in supporting the wise use and rehabilitation of South Africa's vital freshwater ecosystems.

On reflection in 2005, the WWF-MWP team realised that they lacked an understanding of the social sciences. This was important to acknowledge because most of the WWF-MWP's work deals with people. One could argue that conservation is dealing with a social crisis rather than an ecological one, since people are a key driver of environmental degradation. Solutions therefore need to be people-oriented.

Three members of the WWF-MWP team with natural-science training went back to university to do Master's and PhD degrees in the social sciences to deepen their knowledge of how adults learn informally and how societies change. This new understanding was used to support more effective social change, which can improve wetland and environmental management.

Social learning is a type of informal adult learning that does not happen in the classroom and is not about telling people what they should know and do. It brings together people from different backgrounds – with different interests, values and views of the world – to share their knowledge, experience and opinions, and reflect on their own ideas and actions. When done in a carefully structured way in a "safe" space, people feel they can freely air their views and understand the views of others. This can change their outlook and behaviour, leading to innovative shared solutions.

For Vaughan Koopman, WWF-MWP water stewardship project manager, social learning was key to his fieldwork in KwaZulu-Natal. Facilitating a collaborative style of co-learning is often much more difficult in practice, but fortunately the timing was right for engaging with the sugar industry. The team was being approached by sugar farmers, WWF colleagues and industrial sugar buyers for advice on how to engage their respective colleagues in the sugar value chain. The WWF-MWP grasped this opportunity to apply and champion the collaborative style of co-learning, and it still continues today.

Dr Jim Taylor, director of environmental education at WESSA, has worked extensively with the WWF-MWP team. He praises social learning, saying that it is more sophisticated and effective than previous adult learning approaches which were based on seeking to change people through awareness-raising and other "knowledge transfer" approaches.

The social learning approach championed by the WWF-MWP is being integrated into the work of the South African wetland community, and globally through WWF International's New Generation Plantations (NGP) platform. The NGP is a global dialogue platform, providing a space for large forestry companies, government agencies, NGOs and communities to share knowledge and learn from one another's experience with good plantation practices.

The WWF-MWP now plays a key role in the NGP platform, designing and facilitating social learning opportunities through the study tours held around the world. This has allowed the programme to share its work on the landscape approach to water stewardship with numerous WWF network offices, global forestry companies and government participants in the NGP platform.

One could argue that conservation is dealing with a social crisis rather than an ecological one, since people are a key driver of environmental degradation.



Above: A school group learning about wetlands using the WOW education tool.

15 Increasing capacity and skills in the wetland sector through WATER

The work done by the WWF-Mondi Wetlands Programme increased the focus on wetlands as a key component of the freshwater ecosystem.

There was a demand for a skill set that takes into consideration the scientific, economic and social dynamics of the new field of wetland conservation. It was clear that, in order to be effective, the wetland fraternity needed to become more professional. This meant increasing structured education and training to ensure a consistent approach to wetlands. **Training had to be coordinated and appropriate for the different role players to ensure that everyone involved could work towards a common goal.**

To address this need, the Wetland Alliance for Training Education and Research (WATER) was launched in August 2006. The alliance of the four key organisations involved in wetland conservation and management – the WWF-MWP, WESSA, Working for Wetlands and the then national Department of Water Affairs and Forestry – started on a small scale but expanded significantly as work got under way.

Pat Hoffmann, who coordinated WATER for three years, explains: “The aim of the alliance was

to develop, support and facilitate high-quality, relevant wetland education and training in South Africa. Our vision was to support ‘wetlanders’ in all sectors using appropriate environmental education processes.”

As an accredited training service provider, WESSA was asked by the Local Government Sector Education and Training Authority (SETA) to support environmental education for about 300 municipalities, all needing education on how to take care of the wetlands in their jurisdiction. It was a great opportunity to profile WATER and the work of the WWF-MWP. A key outcome of this work was the development of the well-known Environment Practices range of courses at NQF Level 2 (for workers) and NQF Level 5 (for managers). Through these courses hundreds of local government employees have gained practical knowledge and a deeper understanding of water management processes.

The WATER projects included:

- a database of institutions and companies providing wetland education and training;
- a wetland library consisting of an inventory and collection of all existing wetland education training and materials;
- an evaluation of the quality and relevance of current wetland training programmes;
- a training needs analysis for Working for Wetlands; and
- a support programme for trainers providing training for Working for Wetlands beneficiaries.

A key focus was the development of appropriate learning support material, which notably included the Windows on our World: Wetlands (WOW) resource pack (see box). This project was funded by the then Department of Water Affairs and Forestry.

Although the WATER alliance no longer functions as a formal cooperative, its work continues largely through WESSA. WATER created a living legacy by bringing together different partners and building the professional capacity of wetland practitioners and decision makers.

The novel concept of integrated social learning, as encapsulated by the WOW resource pack, is now central to training and education in the wetland community of practice. Naomi Fourie, a compliance and monitoring official in what is now the national

Department of Water and Sanitation, describes the WOW resource as an “excellent training tool”.

The resource pack is still being used today by a wide spectrum of people involved in wetlands, ranging from postgraduate researchers and fieldworkers to teachers, politicians and decision makers. Copies were distributed all over the world, including to other SADC countries as well as India, Korea, Nepal, Spain, Sweden and the USA.



WINDOWS ON OUR WORLD: WETLANDS (WOW) EDUCATIONAL RESOURCE PACK

The Windows on our World: Wetlands (WOW) educational resource pack consists of an A0 size poster, a pack of picture cards, a set of wetland fact sheets, a facilitator’s guide and an interactive CD of digital resources.

The poster is illustrated with a landscape full of visual cues that are helpful in the learning process. There are 27 cards with pictures on the front and information on the back. Twenty of these cards illustrate various environmental problems relating to wetlands, while the other seven illustrate solutions or alternative scenarios to stimulate debate. Each card is a window on a particular part of the environment and the 20 problem cards fit together like a puzzle.

Unlike most teaching manuals, where one has to wade through dense text illustrated with pictures and drawings, this resource works the other way round. Here the starting point is a picture and the text is provided on the back of the picture. Users work together to co-construct the vision of sustainable landscapes where wetlands can become better understood and sustainably managed.

16 Assessing wetland health: the Mondi State of the Wetlands Report

Given its dependence on water resources for its forestry and mill operations, Mondi emphasises sustainability and water stewardship.

“Wetlands are a key part of our freshwater ecological infrastructure. The State of the Wetlands report is a critical part of our journey towards sustained improvement and healthy wetlands. It is about self-correction and the continuous need to adjust direction along the way,” says Themba Vilane, forestry operations manager for Mondi South Africa.

Mondi owns and leases about 250 000 hectares of forestry land in South Africa, including about 20 000 hectares of wetlands. Because South Africa is a water-scarce country with significantly degraded freshwater ecosystems, Mondi needed to understand the health of its priority wetlands and how to better manage them. In 2009, Mondi and the WWF-Mondi Wetlands Programme (WWF-MWP) undertook an 18-month project to identify wetland types, assess the condition of wetlands and agree on management recommendations for the future.

The Mondi State of the Wetlands Report documented the findings of the study. The report itself has been crucial to improving the management of Mondi’s priority wetlands and has given WWF-MWP and Mondi staff a comprehensive understanding of the socio-ecological problems surrounding wetland management in afforested landscapes. It has also enhanced the capacity of all those involved by developing meaningful partnerships and important skills.

“The project has directed our management efforts, and has provided the platform for learning about wetlands and how we can manage them more effectively,” explains Vilane.

Co-developing and implementing the project collaboratively may have seemed less efficient at first, owing to the time required for wide consultation, but the benefits of shared learning and relationship building have proven to be invaluable.

“Mondi is updating the wetland assessments and introducing more regular assessments to help maintain the focus on wetland management. By developing and monitoring critical measures for wetland management, we can ensure that our forestry operations support rather than deplete freshwater resources and manage wetlands as a key environmental asset,” Vilane concludes.

The project has directed our management efforts and has provided the platform for learning about wetlands and how we can manage them more effectively.

Below: A wetland on Mondi’s Gilboa estate – the first forestry property to be proclaimed a private nature reserve in South Africa.



17 Strengthening Mondi's wetland stewardship through organisational learning and development

The WWF-Mondi Wetlands Programme is a great example of how partnerships between environmental organisations and companies can work for the benefit of people, the environment and the respective organisations.

WWF and Mondi have been working together since 1997, and in 2009 decided to strengthen Mondi's wetland stewardship approach through an organisational learning and development process. There was a need for deeper organisational learning and development to take wetland and environmental management to the next level: although wetland management was considered important, it was not yet fully integrated into Mondi's forestry operations. Field staff saw wetland and environmental management as an

added extra on top of their already overloaded work schedule.

The WWF-MWP ran a series of interviews and workshops with a group of 17 Mondi staff (later expanded to 78) to critically reflect on their wetland and environmental management, and identify barriers to integration.

The team then set out to find and implement solutions. According to Chris Burchmore, Mondi's former environmental manager for forestry in

MONDI'S WATER STEWARDSHIP JOURNEY

Mondi's commitment to the WWF-MWP partnership includes strengthening the company's water stewardship practices.

The milestones in Mondi's water stewardship journey include:

- mapping the wetlands on its landholdings;
- assessing their ecological condition in the 2011 State of the Wetlands Report;
- developing and implementing management practices to maintain and improve its wetlands;
- applying a wetland delineation tool to ensure that its plantations avoid sensitive wetlands and riparian zones; and
- supporting research on the water impact of tree plantations on its own lands, in partnership with the University of KwaZulu-Natal and the Water Research Commission.

Although good progress has been made, Mondi recognises that it can improve its water stewardship efforts.

As an international benchmark, the Alliance for Water Stewardship (AWS) standard defines criteria and indicators for how water should be managed at a site and catchment level in a way that is environmentally, socially and economically beneficial. Mondi has agreed to test the AWS standard in some of its forestry operations

to benchmark its water stewardship practices. Brent Corcoran, Mondi's environmental manager for forestry in South Africa, says the pilot project focuses on forestry management where there are multiple operations within a single catchment. "We want to get a sense of how the AWS can help us improve our water stewardship practices."

Another initiative compares the results of Mondi's own Water Impact Assessment tool for its forestry operations with the South African version of the WWF Water Risk Filter Tool. This will help Mondi to understand possible water risks for its forestry operations and how to respond to these, for example in the water-stressed Mhlathuze catchment in KZN, where Mondi has plantations in the catchment headwater areas, and a pulp and kraftliner mill at the bottom end of the catchment in Richards Bay.

The 2011 Mondi State of the Wetlands Report is being reviewed to assess how effectively the recommendations have been implemented. In parallel, the 2016 Mondi State of the Wetlands assessments are under way. Corcoran says a more systematic approach is being followed, where wetlands in different operational units will be assessed every year, thus keeping wetland management more visible for Mondi's business.

South Africa, Mondi strengthened its environmental learning processes. “We encouraged foresters and environmental and community engagement staff to work together on wetland and environmental projects, stimulating greater dialogue and informal learning,” he says.

The progress report presented to Mondi South Africa’s senior management team and forestry field staff highlighted an important aspect of the

research: the team had enjoyed a “safe space” to critically reflect on their environmental work in a structured and collaborative way.

The social learning approach helped bring together an inter-disciplinary Mondi team. People from different disciplines, each with different values and ways of seeing the environmental world, learnt to understand one another and collaborate more effectively.

Jacqui Shuttleworth

1971–2016

Jacqui Shuttleworth will be remembered for many things. She was a loving wife to Michael, wonderful mother to their two children, and a loyal and committed friend and colleague to many. Jacqui’s compelling passion made a lasting impression on those who encountered her.

In the late 1990s, as part of the then Department of Water Affairs and Forestry, Jacqui was one of the original pioneers of the Working for Water programme. She played a pivotal role in building the credibility of the programme in the early years and helped to catalyse the establishment of Working for Wetlands. Dr Guy Preston, deputy director-general: Environmental Programmes at the Department of Environmental Affairs, remembers Jacqui as a “technical expert with unshakable integrity and a strong understanding of planning, monitoring and evaluation, data management and reporting”. The success of Working for Water, and the programmes that followed, all benefited from Jacqui’s drive, insights and professionalism.

Jacqui and Michael settled in KwaZulu-Natal, where Jacqui joined Mondi in 2005. Here she continued her work as a specialist in land-use practices, overseeing ground-breaking work on invasive plant species, wetlands, fire, erosion and related topics.

Paying tribute to Jacqui, Viv McMenamin, Mondi South Africa’s director of land and forestry, says, “Jacqui was a wonderful colleague and friend. As an environmental manager she displayed great integrity,



Jacqui will be greatly missed in so many ways, but her legacy will live on.

combining a real passion for the environment with a deep understanding of the needs and challenges of forestry operations. Her playful sense of humour brought people together and helped when handling challenging topics.”

Jacqui confronted her cancer with the courage and fortitude that anyone who knew her would have expected. She will be greatly missed in so many ways, but her legacy will live on.

At Jacqui’s request, Mondi has placed a bench overlooking the Gilboa wetland in her memory.

The birth of a global
partnership brings a shift
in focus – from wetlands
to water stewardship

Chapter 3

18 A global partnership is born

The WWF-Mondi Global Partnership was launched in February 2014, building on the successful wetland work in South Africa and boreal forest work in north-west Russia.

The work done by the WWF-Mondi Wetlands Programme (WWF-MWP) in South Africa built trust between Mondi and WWF and led to discussions about how to develop a wider partnership across Mondi, beyond its forestry operations. WWF and Mondi also had a good working relationship in Russia, where the focus had been on identifying and protecting the remaining large, intact boreal forests. Mondi was one of the founding members of the WWF New Generations Plantations (NGP) platform that promotes shared learning of sustainability practices among global forestry companies and governments.

The aim of the global partnership is to continue the good progress Mondi had already made in minimising the impacts of their operations on forests, climate and water, and encouraging more sustainable practices within and outside of the forestry industry.

“The idea was to take the lessons learnt and progress made in working on our forestry operations and spread that influence and good practice throughout our group, our industry and

beyond”, says Neil Burns, head of sustainable development for the Mondi Group. “We’ve made good progress in addressing some of the broader sustainability issues, particularly related to water, the role of forests and the cascading use of wood, but there’s still a lot to do.”

Ecosystem, manufacturing and product stewardship

At the outset, the WWF-Mondi Global Partnership identified three main areas of work: ecosystem, manufacturing and product stewardship. The intended goal with the design of the partnership was to strengthen the message that sustainable business practices make good business sense, says Burns.

Ecosystem stewardship, for instance, builds on and expands the scope of the existing wetland work with Mondi in South Africa, to work with neighbouring agriculture land users in the broader landscape. In Russia the focus was on protecting high conservation values (HCVs) in the boreal forests, and demonstrating that increasing productivity and conservation could go hand in hand.

We’ve made good progress in addressing some of the broader sustainability issues, particularly related to water, the role of forests and the cascading use of wood, but there’s still a lot to do.



Above: Deon Nel (then with WWF-SA), Mumsie Gumede (then with WESSA), David Lindley (WWF-MWP), Ron Traill (Mondi South Africa), Morné du Plessis (WWF-SA) and Viv McMenamin (Mondi South Africa) on a field trip in 2008.

Manufacturing stewardship looks at further reducing the climate and water footprint of Mondi's operations worldwide and promoting resource efficiency, recycling, the cascading use of wood and the longevity of products.

As far as **product stewardship** is concerned, the idea has been to further enhance the environmental performance of Mondi's products through credible certification and the efficient life-cycle use of materials in paper and packaging products.

Matt Wilkinson, who manages the global partnership for WWF, says **WWF considers Mondi to be a strategic company operating in a strategic sector. "We were delighted that, when the opportunity arose, we were able to put together a holistic work plan for our engagement. We now no longer just work on reducing the forestry sector's impact on landscapes.** We also work on further reducing the environmental footprint of Mondi's own operations and products. This makes the partnership the most comprehensive of all our paper company engagements. We have made decent progress but there is still much to be done to complete our ambitious work plans."

The evolution and success of the WWF-MWP is one of the great conservation stories of South Africa, if not the world. From its humble beginnings in KwaZulu-Natal 25 years ago, the programme evolved into a well-respected national programme instrumental in developing South Africa's wetland community and influencing wetland policy and management.

Fast-forward to 2016, where the WWF-MWP is now part of a global conservation partnership working in South Africa, Europe and Russia to make an impact at a greater scale. It has also stretched its focus beyond wetlands and is, through an integrated cross-sectoral approach, piloting new and exciting water stewardship approaches in some of South Africa's key catchments.

Pioneers, convenors, catalysts, resilient and evolving – this is how I would describe this ground-breaking programme and its incredible 25-year run and legacy.

– Dr Deon Nel, director of conservation:
WWF International

We've enjoyed a successful working association with WWF for many years and joined forces on a much larger scale by launching the global partnership in 2014. This partnership is enabling shared learning and collaborative action to promote ecosystem, manufacturing and product stewardship. In addition to the leading-edge work being done by the WWF-MWP, achievements include launching the WWF Boreal Forest Platform in Russia; exploring effective ways of balancing increased commercial yields while protecting high conservation value areas and benefiting local people; and a global cooperation between WWF's New Generation Plantations platform and WWF-MWP to expand the use of social learning and create shared value.

– David Hathorn, CEO: Mondi Group

19 Catalysing improved water stewardship through the landscape approach

The landscape approach to water stewardship helps water users in a catchment to work together across physical and sectoral boundaries to build the resilience of natural and social systems at a landscape scale.

“We believe effective water stewardship can only be achieved when different water users and value-chain role players come together and share experiences and insights”, says Vaughan Koopman, a water stewardship project manager for the WWF-Mondi Wetlands Programme (WWF-MWP). “By building a shared understanding of risks, a shared response can be co-created.” Through good stewardship, wetlands and other ecosystems can continue to provide benefits to people in the long term to ensure water security.

In 2013, the innovative idea of using the landscape approach to strengthen water stewardship practices along agriculture and forestry value chains was put on the table by the WWF-SA head of biodiversity at the time, Dr Deon Nel (now WWF International’s director of conservation).

The main idea behind the approach is that there are multiple users in river catchments who are connected by a common asset and risk, namely water. Previously, conservation work looked at a specific piece of land in isolation, whereas the landscape approach promotes working with all adjacent land users at a landscape scale, including key role players in the agriculture and forestry value chains.

The landscape approach acknowledges that value-chain role players, including retailers, finance institutions, insurance companies and agriculture commodity processors, also have a responsibility to support good water stewardship practices by farmers. Understanding the risks and co-creating a response to achieve resilience involves working closely with the plantation forestry, dairy and sugar-farming sectors, and with local governance authorities.

Mondi was receptive to this shift and recognised the importance of an integrated and inclusive approach. Although limited water supply is a major business risk, no single player has complete control over this aspect and the proposed cooperative approach made good sense. An obvious area for the landscape work in KwaZulu-Natal (KZN) was in the water-stressed uMngeni and uMvoti Rivers catchments, both of which support many land uses from forestry to agriculture, and supply fresh water to downstream users. The uMngeni River catchment alone accounts for roughly 20% of South Africa’s economic output, and brings drinking water to about five million people in and around Durban and Pietermaritzburg.

A third highly water-stressed catchment – the uMhlathuze, near Richards Bay in KZN – is currently being scoped for future work.

*By building a shared understanding of risks,
a shared response can be co-created.*

20 Engaging with dairy farmers

When you talk to farmers about lowering electricity costs through more efficient water use, they tend to sit up and listen, says Sue Viljoen, a water stewardship project manager for the WWF-Mondi Wetlands Programme.

Viljoen is working in the upper uMngeni and uMvoti River catchments to help dairy farmers become better water stewards, thereby saving water and reducing their energy consumption.

Working with the dairy industry is the result of a pilot project undertaken by the WWF-MWP to analyse the water impact of major agricultural sectors in these catchments. Dairy farms depend on high volumes of good quality water for pasture irrigation, watering livestock and cleaning their milking parlours. They also run the risk of polluting water sources through fertiliser run-off from pastures and from slurry dam overflows (if not managed correctly, or during high rainfall events).

For the pilot project, 15 farmers participated in irrigation efficiency and wastewater-handling assessments funded by the WWF-MWP. The farmers benefited from expert advice on how to adjust their production practices, substantially reduce their electricity bills and be better water stewards.

The insightful project learnings have provided clear evidence of how water stewardship is good for business. One farmer, for instance, is now trialling a variable speed drive for his irrigation system after the report showed that he could make significant electricity and water savings.

“The pilot project has been a very useful engagement tool, and has benefited farmers in a time of economic pressure and severe drought,” Viljoen says. The assessments have been so successful that an additional 10 farms are now involved.

WWF-SA has also been working at an industry level with representative bodies of the dairy sector and retailers such as Woolworths, with a view to leveraging wide-scale change in this water-dependent sector.

Below: Centre-pivot irrigation at Karkloof, KZN (left) and a herd of dairy cows on irrigated pasture (right).



21 Building capacity at local authority level

The uMngeni River flows through seven municipalities on its way to the Indian Ocean, making these local authorities key water security players in water infrastructure management and land-use planning.

The Capacity for Catchments uMngeni Ecological Infrastructure project was co-created by WWF-SA and WESSA to build the catchment management capacity of local municipalities and traditional authorities. The project is implemented by WESSA and funded by the Maas Maasen Trust through WWF Netherlands.

According to WESSA facilitator Lemson Betha, the project focuses on strengthening the understanding of local authorities of their dependence on surrounding freshwater ecological infrastructure, and building their capacity to be responsible freshwater stewards.

A socio-ecological study was conducted in 2013 to identify all the key stakeholders, their influence on and their level of understanding of water resource management. This helped to identify which organisations and individuals to target. A stakeholder-mapping exercise was used to select staff in key municipal and traditional authorities to participate in numerous workshops and leadership seminars on topics such as sustainable development, the use of environmental management tools and integrated water resource management.

Inkosi Mchunu from Mpofana Municipality attended an ecological infrastructure workshop for traditional leaders, and shared his experience. “As human beings we depend on natural resources for our survival, therefore it is important for us to take care of them.” Since the workshop, Mchunu has shared the information with the rest of his community. He and his advisers now consider the protection of key wetlands, rivers and other sensitive areas when allocating land to community members for farming or building. “We are also encouraging community members who are planting next to streams and rivers not to use fertilisers that might

© WESSA



be dangerous to aquatic plants and animals,” he says.

Khethiwe Methula, an environmental officer at the Department of Water and Sanitation, says the workshop was an eye-opener. “For a long time the focus has been on social and economic development and the environmental factor has been neglected.”

The project also enjoys the support of the South African Local Government Association (SALGA) and the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs. In 2017 the project will focus on supporting several water stewardship “change-orientated” projects, initiated and implemented by participants.

Above: One of the participating groups in the Capacity for Catchments uMngeni Ecological Infrastructure workshops.

For a long time the focus has been on social and economic development and the environmental factor has been neglected.

22 New Generation Plantations: a global platform for sharing lessons and experiences

The “new generation plantations” idea was born in 2005 when Mondi South Africa hosted WWF International and leading global forest companies for a field visit.

The concept of new generation plantations involved assessing Mondi's progress from detrimental “wall-to-wall” afforestation to a new generation of plantations where wetlands, riparian areas and other high conservation value (HCV) areas are protected in a mosaic landscape of planted forests and conservation areas. The stark difference between the “old” and the “new” way of planting convinced WWF and a core group of leading plantation companies and government agencies to launch the New Generation Plantations (NGP) platform in 2007 to explore how well-managed plantations can contribute to sustainable development.

The NGP platform enables shared learning on a global scale and provides evidence that well-managed plantations support biodiversity conservation, benefit local communities and contribute to economic growth. Every year, NGP hosts two international in-field study tours for about 50 participants, along with an Encounter (or annual conference). Luis Neves Silva, WWF International manager of NGP, says the vision is forest plantations that “contribute positively to the welfare of local communities without replacing natural forests or other important ecosystems, such as wetlands”.

Study tours bring together participants from a variety of backgrounds to share experiences in the field. Various social learning tools are used

to encourage collaborative learning and support new ways of thinking. In 2013, NGP visited South Africa for a study tour in KwaZulu-Natal (KZN). In 2014 the NGP annual Encounter was hosted in Cape Town, along with a study tour in the uMngeni River catchment, both organised by the WWF-Mondi Wetlands Programme (WWF-MWP). Mondi's Tetworth and Gilboa plantations in KZN were included in the study tours, showing the real social and environmental benefits of wetland delineation and restoration.

This was the first time that a study tour focused on working at a landscape scale across multiple land uses, not just plantation forestry. Participants included a wide range of stakeholders from over 20 countries, such as government representatives, global forestry companies, NGOs and local communities.

Neves Silva soon recognised the value of the WWF-MWP's work at a landscape scale, integrating multiple land uses and social learning skills. “Thanks to the collaboration between the WWF-MWP and NGP, we could evolve the way in which we run study tours, bringing in a lot of social-learning techniques,” he comments. “Other WWF International staff have seen how differently they can work in their landscapes.”

The NGP platform has also enabled bilateral collaborations with companies and NGOs in countries with common problems, such as the

The vision is forest plantations that contribute positively to the welfare of local communities without replacing natural forests or other important ecosystems such as wetlands.

exchange collaboration between the WWF-MWP, WWF Chile and Chilean plantation companies. Trevor Walter from WWF Chile explains how useful this exchange has been. “We realise that to be effective and have an impact, our approach needs to engage stakeholders in a variety of different ways.”

Another NGP collaborator, Andrew Heald, technical director of the Confederation of Forestry Industries in Scotland, says these study tours were a great opportunity to understand how Mondi and WWF were aiming to create shared value when it came to water resources. **“Spending time in water catchments in South Africa and seeing how forestry plantations have been removed from natural wetland sites**

really resonates with forest management in the UK and the careful balance between afforestation and peat-land restoration,” he says.

The eucalyptus plantation realignment and withdrawal of commercial trees from wetlands in the iSimangaliso Wetland Park World Heritage Site on the east coast of KZN is a great example of how productive plantations can be managed within a wildlife park and the importance of openness and trust in reaching mutually beneficial land management decisions. “The WWF-MWP is a world-class demonstration of what can be achieved through dialogue, understanding and cooperation,” says Heald.

Below: Mondi’s Lake Merthley plantation near Greytown in KZN is a good example of a new generation plantation.



Inspiring ingredients in a 25-year journey of success

Chapter 4

23 Meaningful long-term partnerships powering the WWF-MWP's success

If you want to go fast, go alone. If you want to go far, go together.

– African proverb

Forging partnerships and understanding between key players in the field of wetland conservation has been integral to the continued success of the WWF-Mondi Wetlands Programme (WWF-MWP) since its inception.

A small number of dynamic, passionate and committed individuals have driven this process, but it is the strong relationships and partnerships they built along the way – between non-government conservation groups, companies and the South African government – that have enabled the WWF-MWP to become a leader in its field.

The first steps

The WWF-MWP's first corporate relationship was facilitated by Advocate Louis Nel, legal adviser to Rennies, who arranged a meeting between Rennies and the then South African Nature Foundation (predecessor to WWF-SA) to discuss sponsorship. Wetlands were on the Foundation's list of projects, with a relatively modest requirement of R50 000 a year. Nel and Rennies chief executive at the time, Richard Wilkinson, agreed to support this project, helping to start and grow one of the most enduring and influential environmental programmes in South Africa.

The Rennies Wetland Project was born in 1991 – a partnership between Rennies, Ezemvelo KZN Wildlife, WESSA and WWF-SA, with additional contributions from the Mazda Wildlife Fund and South African Breweries (now SABMiller). Bidvest

bought Rennies in 2000 and decided not to renew the sponsorship, so a new partner was needed.

Mondi was the obvious choice. "We'd started working with Mondi back in 1997 when they were the first large landowner to proactively work with us, and they became our principal funder in 2001," explains WWF-MWP manager Dr David Lindley.

The timing was serendipitous, suggests Peter Gardiner, Mondi's group natural resources manager, as the industry grappled with the implications of the new National Water Act and water licences for forestry plantations. As a precautionary measure, wetlands and other habitats were being allocated unrealistically wide buffer zones (300 m in places) under the new water licensing procedure, threatening the viability of new and existing forestry plantations. Finding a solution was critical to the future of South African forestry.

Gardiner and Lindley crossed paths on a government field trip to resolve a controversial plantation licence application, with Lindley making a strong case for wetland conservation. It became clear through Forestry South Africa (FSA), that the Rennies Wetland Project (now the WWF-MWP) and the industry were seeking the same thing – a practical wetland delineation method. Everyone quickly realised that the detailed soil surveys recently conducted by Mondi and others in the industry were a crucial part of the solution.

“David’s vision and passion for wetland awareness and protection were catching,” recalls Gardiner. “It felt right for Mondi to partner with the wetland programme.” Sixteen years later, Mondi is still funding the WWF-MWP – a unique achievement of a major corporate sponsorship for a single conservation programme in South Africa.

Others join in

The WWF-MWP also benefited from the stalwart support of the Mazda Wildlife Fund over a 23-year period. Mazda provided 4x4 vehicles with instantly recognisable branding for the project.

Another significant partnership has been with the South African government, and here, too, strong relationships were forged, including with John Dini of the then national Department of Environmental Affairs and Tourism. **“I think any of us working individually would really have struggled to do on our own what was achieved by working collaboratively. It proved to be a very powerful combination,”** Dini says.

Dini tactfully describes relationships in the early days as “a very interesting social process to be part of” and remembers that it could be “quite adversarial” at times. “It was far more complicated than we ever realised, and it took a long time to develop trust and negotiate compromises. But eventually we developed a workable solution for everyone – for industry, for the regulator, for civil society.”

Below: The 2002 WWF-MWP team in the field.

Gardiner confirms this “bumpy ride”: “Mondi was never a passive funder. We participated fully and were often called in to mediate when specialists became too embroiled in the detail. Keeping all parties aligned with the vision was extremely rewarding.”

Recipe for success

Malcolm Powell, former chief executive of WESSA and chairman of the WWF-MWP steering committee for many years, says an important part of maintaining the successful long-term partnership has been the annual *bosberaad* – finding time for the partners to get together, usually at a remote wetland-related venue. “After the meeting we would gather to talk informally about our differences and what we expected to get out of the partnership. This helped us to develop a much greater appreciation for other points of view,” he says.

The participants also shared a genuine belief in the value of the programme, Powell adds. **“We all believed we were making a meaningful contribution to conservation, and that’s something that doesn’t always apply in projects. We were able to see positive change** – for example, when Mondi pulled back its plantation tree lines from wetlands and buffer zones over thousands of hectares. It really was a great boost for the programme and for conservation.”

Gardiner points to four key ingredients of the successful partnership: a meeting of minds in understanding the objectives of the programme and its partners; trust between partners; an active steering committee, strong leadership and consistent funding to develop and maintain a highly effective core wetland team; and solid supporting science and the expertise of specialists, partners and key government agents.

Lindley says the development of strong, long-lasting relationships between NGOs, companies and the government was crucial to the success of the WWF-MWP. “Relationships, dialogue, reflective conversations, mutual respect and trust are the currency of the programme’s work. Not many conservation programmes have these special long-term relationships. It doesn’t just happen miraculously, the partnerships need to be actively cultivated and nurtured from all sides.”



© WWF-MWP

24 Accolades for the WWF-MWP

The WWF-Mondi Wetlands Programme's 25-year journey of forging partnerships, creating public interest and enabling participation has allowed the team to learn and evolve.

By listening to and sharing with others, the WWF-MWP team has been able to strengthen their knowledge base, sparking shared excitement and passion in the process.

The programme has been honoured to be recognised by partner organisations, both local and international, top conservationists, media, companies, NGOs and the government. Working constructively with others has been the key to the WWF-MWP's success. Without consistent funding and the support of the many sponsors this would not have been possible.

“The successful future of the South African forestry industry is dependent on all players working together to find solutions to the challenges facing the industry. The role that the WWF-MWP played in coming up with a practical delineation method, has been immensely helpful. Through using this methodology to clear riparian and wetland areas, the industry has released water back into the hydrological system and has re-established ecological corridors, which are vital for sustaining species and ecosystems. It has furthermore assisted industry in demonstrating the environmental benefits of responsibly managed commercial plantations in South Africa, beyond the economic and social benefits which the commercial forestry industry provides.”

– Michael Peter, Executive Director: FSA

The WWF-MWP's prestigious accolades include:

- 2002:** Winner of the Nedbank Green Trust Award for the “Established organisations” category – sponsored by Nedbank and the *Mail & Guardian*
- 2007:** Winner of the Top Five Mazda Wildlife Fund Projects
- 2008:** Winner of the South African Institute of Valuers Award for Excellence in Property for their “Initiative in preserving our natural resources” category
- 2012:** Winner of the international Mondi Diamond Awards in the “Sustainable development” category
- 2013:** Mondi wins the Nedbank Capital Award for sustainable business achievements in three areas of work, including partnership with the WWF-MWP
- 2016:** Winner of the silver award at the Annual Eco-Logic Awards in the “Water management” category

25 The inspiring and dedicated WWF-MWP team

The success of the WWF-Mondi Wetlands Programme over the past 25 years can be largely attributed to the programme's current and former team members – a dedicated group of individuals who all in their own unique way contributed to keeping the WWF-MWP “engine room” running.

Present members of the WWF-MWP team (2016)

“What I love most about the WWF-MWP team is the passion and energy that we all share. We are also a multi-disciplinary team with academic training in both the natural and social sciences. This has improved our ability to support social change for improved wetland management. When combined with the way we have stuck together and overcome challenges, it makes for a rewarding, fun and productive work environment.”

– David Lindley, manager (1996–present)

“I have spent the majority of my career with the WWF-MWP. The time has flown, probably because it's challenging, rewarding work and I never stop learning. Over the years I've been fortunate to work alongside some very dedicated colleagues, ‘wetlanders’, farmers and foresters. Their passion for water stewardship and our joint successes keep me motivated. Our rapidly changing world continues to place ever greater pressure on our water resources and livelihoods, but I'm confident we can make a difference.”

– Vaughan Koopman, water stewardship project manager (2002–present)



“The WWF-MWP has an incredibly rich history of pioneering wetland conservation in South Africa, and these ripple effects have also been felt in other countries. I feel proud to be a part of this. Our work and expertise have been highly regarded for many years. When I look back at the legacy of the WWF-MWP over the past 25 years, I feel we have left a lasting impression on conservation in South African and beyond – the development of a wetlands community of practice, as well as the change that has taken place within the management practices of a number of agricultural sectors.”

– Sue Viljoen, water stewardship project manager (2015–present)

Left: The 2016 WWF and Mondi South Africa management team.

Former members of the WWF-MWP team

“ It is my love of people and education that has kept my interest over time. A lot of what the WWF-MWP does is about working with people and learning together. As a result we all feel valued and part of a family, rather than a number on a payroll. ”

– Sharon Wilson, operations coordinator
(2005–present)

“ I am excited to be part of a mature, cutting-edge programme that continues to achieve lasting change in the way people see, use and protect our most precious resource – freshwater. As the demand on this resource continues to grow, we need to look for new and innovative opportunities to do this. The WWF-MWP partnership allows us to approach this challenge in a unique way, where we seek change co-created by everyone. On a personal level, this has certainly given me insight into new ways of achieving conservation goals and I’m proud to be part of this team. ”

– Gareth Boothway, water stewardship
project manager (2015–present)

“ I love fieldwork and being at the coalface of our work as I believe this is where one gets to learn the most. Having a job which allows me these opportunities is a real treat and one of the things I enjoy the most about being part of the WWF-MWP. My hope is that my work will enable the sectors and stakeholders we work with to manage their water risk and play their part in maintaining our country’s highly precious ecological infrastructure. ”

– Dudu Khena, water stewardship
project manager (2016–present)

“ I loved working with the brilliant interdisciplinary team. We all brought a different set of skills to the project and while we were academically strong, we were also all experienced in working with people on the ground. When we came together we could support and learn from one another and tackle any challenge. ”

– Michelle Hiestermann, environmental learning
and social change specialist (2010–2013)

“ I regard the WWF-MWP as one of the best teams I’ve ever been a part of. During my time with the programme, I learnt a variety of skills ranging from communication, computer literacy, driving and project reporting to successfully engaging with different stakeholders. I also got exposed to what it means to practise environmental conservation on the ground. We changed the face of community wetland conservation landscape in South Africa. I am what I am because the Mondi Wetlands Programme ‘raised’ me. ”

– Vhangani Silima, communal wetland-users
project coordinator (2001–2008)

“ My memories of the WWF-MWP include having loads of fun while doing something that I really loved. There was enough freedom and the flexibility to learn. I am proud to have been part of a team that contributed significantly to the development of a wetland community of practice and promoted wetland science in South Africa. Today, I am a successful wetland consultant because of the experience, networks and expertise that I gained while with the WWF-MWP. ”

– Damian Walters, wetland ecologist (1998–2013)

Lessons for a water-secure future

We are facing unprecedented times. Planet Earth, already growing hotter and significantly more crowded by the decade, is facing an imperfect storm of dwindling water supplies and increased demand. South Africa has been gripped by the drought crisis, joining other regions that are experiencing low rainfall in a warming world.

Our future challenge is to grow South Africa's economy while using the same amount of water more effectively. To create change at the scale and speed that we need to improve the lives of South Africans, all stakeholders must be part of the solution. This means coordinated action between civil society and the private and public sectors. "The WWF-MWP is a prime example of the agency of partnerships, and the programme's activities guide our aspirations for water security for people and nature," says Christine Colvin, senior manager of WWF-SA's freshwater programmes.

The evolution of the WWF-MWP over the last 25 years has taught us critical lessons in bringing about positive change in the South African water sector. A passionate and dedicated team has successfully aligned different organisations towards a common goal and improved wetland protection. The South African environmental sector can also learn from the programme's

adaptable approach to harness the critical ingredients necessary to bring about change: building the evidence base through good science; aligning powerful partners with a common goal; convening difficult conversations about changing the status quo; and ensuring that a diversity of views are heard in finding the way forward.

"The programme and its partners have overcome incredible obstacles to change the recognition of wetlands in legislation and practice in the forestry and agriculture sectors. This has given us the training we will need to face the challenge to maintain 'enough, for all, forever' in an increasingly volatile world," says Colvin.

While South Africa's legislation has become more focused on sustainable water use, government institutions are still in transition. The private sector therefore has a critical role to play in good governance for a water-secure South Africa.



Conclusion

Because there will never be enough “feet on the ground” to enforce water compliance in all areas of South Africa, foresters and farmers are the WWF-MWP’s “catchment managers” across the country. “That’s why it is critical to inspire and enable them to be good water stewards,” says Colvin.

The WWF-MWP has collaborated with forestry stakeholders on new environmental criteria for the industry standard, the Forest Stewardship Council® (FSC®) standard for South Africa. This will raise the bar in terms of best practice and, more effectively, address the persistent problem of thirsty alien plants invading catchment areas from plantations. Having champions like Mondi supporting better production practices in water-source areas is vital in ensuring our future water security.

“Water is a critical resource for our industry and is required at various stages throughout the production process,” explains Viv McMenamin, director of land and forestry for Mondi South Africa. She notes that the Group’s responsible water use already includes protecting

water resources and freshwater ecosystems on or adjacent to its plantations, supported by environmental management plans and water impact assessments. Through its partnership with the WWF-MWP, Mondi has improved management of its wetlands and removed commercial trees from riparian zones. It also supports water science through the Mondi Ecological Network Programme.

Mondi’s commitment to playing its part in achieving a sustainable water future for South Africa is undiminished. **“We will continue to manage our land and associated freshwater ecosystems responsibly, and to protect high conservation value areas, including water resources,”** McMenamin concludes.



Thanks

Thank you to our funders and supporters

The WWF-MWP would not have been able to achieve its significant results without the generous donations of its major funders and supporters over the last 25 years. These include:

Mondi Group

Rennies Group

WWF-SA

Ezemvelo KZN Wildlife

Mazda Wildlife Fund
(now Ford Wildlife Foundation)

South African Breweries (SAB; now SABMiller)

WESSA

WWF International

WWF network offices

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South African national government departments

Department of Agriculture and Forestry

Department of Environmental Affairs and Tourism

Department of Water and Sanitation

Provincial government departments

Eastern Cape Department of Economic Development and Environmental Affairs

Free State Department of Economic Development, Tourism and Environmental Affairs

Gauteng Department of Agriculture and Rural Development

KwaZulu-Natal Department of Agriculture, Environmental Affairs and Rural Development

Limpopo Department of Economic Development, Environment and Tourism

Mpumalanga Department of Economic Development, Environment and Tourism

Parastatals

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Companies and industry associations

The Coca-Cola Company; Illovo Sugar Ltd; Masonite; Milk Producers Organisation; Mondi Shanduka; NCT; Nedbank; Noodsberg Cane Growers Association; SA Canegrowers; Sappi; Siyaqhubeka; South African Sugar Association; South African Sugar Research Institute; UCL (Pty) Ltd; Woolworths

NGOs and community-based organisations (CBOs)

Association for Water and Rural Development; Endangered Wildlife Trust; Global Environment Facility; GroundTruth; Institute for Natural Resources; Maas Maasen Fund; The Ramsar Convention; SA Crane Foundation; Solidaridad

Lastly, we thank and acknowledge all our “wetland champions” who shared our passion and vision and gave of their time so selflessly.

Glossary

Aquatic ecosystem: An ecosystem found in a body of water, with aquatic flora and fauna that have adapted to live in waterlogged conditions with minimal oxygen. There are two main types of aquatic ecosystems – marine and freshwater.

Bioregion: An area defined by natural parameters, and that includes one or more ecosystems, inhabited by characteristic animals and plants; a geographic region that “contains whole or several nested ecosystems and is characterised by its landforms, vegetation cover, human culture and history” (National Environmental Management: Biodiversity Act, 2004).

Boreal forest: A biome characterised by coniferous forests consisting mostly of pines, spruces and larches; also called snow forests or Taiga, a Russian word for “swampy, moist forests”.

Bosberaad: A strategy meeting held outdoors, usually in the bush.

Buffer zone see **Wetland buffer zone**

Cascading use of wood: Using wood, a scarce and valuable natural resource, more efficiently by turning it into products that can be used, reused, recycled and finally burnt for energy, rather than taking wood straight from the forest and burning it.

Delineation: A practical procedure sanctioned by government that defines the edge of a wetland.

Ecological reserve: The quantity, quality and reliability of water required to protect aquatic ecosystems in order to secure ecologically sustainable development and use of the relevant water resource (National Water Act, 1998). The ecological reserve maintains aquatic ecosystems in such a way that they can continue to provide ecological goods and services to society.

Ecosystem services: The benefits provided by ecosystems, such as food, water, fibre and recreation, which contribute to human well-being.

Estuary: River mouths, which occur at the bottom of the catchment where the river enters the sea.

Floodplain: A type of wetland with a river flowing through it. In times of very high rainfall, the river floods onto the flat wetland areas adjacent to the river channels.

Hydromorphic soil: Waterlogged soils influenced by periods of permanent, seasonal or temporary

water saturation associated with marshes, swamps, bogs or poorly drained flat uplands.

Hydrophytic vegetation: Plants that are adapted to live in permanent, seasonally or temporarily wet conditions; their roots must be submerged for a minimum of one month per year.

Marsh: A type of wetland dominated by reeds and sedges that may be temporarily, seasonally or permanently wet.

Seep: A type of wetland dominated by grasses that occurs on the hill slopes of upper river catchments where groundwater seeps out to the surface.

Stream-Flow Reduction Activity (SFRA):

A land-use activity that significantly reduces river flow, making it subject to legislation and water licensing.

Terrestrial ecosystem: A dryland ecosystem, containing fauna and flora that have adapted to live under dryland conditions.

Vlei: A type of wetland dominated by grasses found in the middle reaches of a river catchment that may be temporarily, seasonally or permanently wet.

Water stewardship: The use of water that is socially equitable, environmentally sustainable and economically beneficial. This is achieved through a stakeholder-inclusive process that involves site- and catchment-based actions. Good water stewards understand their own water use, catchment context and shared risk in terms of water governance, water balance, water quality and important water-related areas; and then engage in meaningful individual and collective actions that benefit people and nature.

Wetland: Land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or is periodically covered with shallow water, and which in normal circumstances supports or would support vegetation typically adapted to life in saturated soil (National Water Act, 1998). The term is a family name for different types of wetlands that extend from freshwater to marine environments.

Wetland buffer zone: A natural protection zone between the edge of the wetland and where commercial forestry or agricultural activities may commence.



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